

INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week
There'll Always Be an England
We Admire This Man
From Our Mailbag

Stories of the Week

"Why don't you quit your drinking?" implored Sammy Souseman's friends. "You'll live a lot longer."

Sammy finally gave in to their pleas and promised that henceforth nary a drop would pass his lips.

A week passed, during which time Sammy faithfully remained on the wagon.

"How do you feel now?" hoped a pal.

"You were right, fellows," agreed Sammy, "about living longer. That was the longest week in my whole life!"

A woebegone fellow entered a pub and climbed onto a bar stool. He ordered a whiskey and soda, and consumed it in morose silence. He downed several more drinks, and became increasingly moody after each. Eventually he was so moody that he was a Problem.

"Look here, Bub," the bartender finally told him, "drinking liquor is legal, all right, but it ain't compulsory, you know!"

There'll Always Be an England

Now and then we've been caustic about the British Labor Party's experiment in Socialism, and about the billions of dollars American taxpayers are donating to support that ignoble, doomed-from-the-start experiment.

But never let it be said that we underestimate the English people.

The brothers James and Muirhead Bone (where else but in jolly ol' Lunnion could you find names like that?) jointly have authored an entertaining book, "London Echoing," from which we are happy to lift a heartening story:

German buzz-bombs buried an old lady in her own home. Eighteen hours later a rescue squad unearthed her—faint, but still alive. By her side they found a bottle of Scotch. Quickly uncapping the stimulant, a rescuer ordered:

"Here! Take a swig o' this!"

"Gimmie back that bottle," primed the old lady. "I'm saving it for an emergency."

We Admire This Man

One of the most interesting and impressive individuals we met at the All-Industry Exposition in Atlantic City was R. J. Funkhouser, who operates Victor Products along with many other activities.

This remarkably versatile gentleman also is Editor-in-Chief of *The Jefferson Republican*, a unique tabloid newspaper published at Ranson, West Virginia. Slogan of this newspaper (Mr. Funkhouser coined it) is: "Your Personal Liberty Is America's Most Precious Natural Resource—Guard It Against All Enemies!"

To which we and thousands of readers of *AIR CONDITIONING & REFRIGERATION NEWS* will utter a hearty "Amen!" And it's a pleasure to quote this recent editorial, entitled "A Rose by Any Name," from Mr. Funkhouser's newspaper:

"In referring to President Truman's Welfare State program this newspaper has employed a variety of terms to describe that legislative newsworm. However, as much as we like to vary our verbiage, we feel that perhaps we have been evading the issue by referring to the present governmental plan as statism, New Dealism, Fair Dealism, Welfare Statism, Collectivism, Trumanism, and whatnot, when it is nothing but plain, run-of-the-mine SOCIALISM. Hence, beginning now, we are going to call the Truman form of government exactly what it is—SOCIALISM!"

"William Shakespeare once wrote 'a rose by any name would smell as sweet.' Socialism just smells! No matter if it is dressed up in the unctuous phrase 'Welfare State,' it is still Socialism of the Karl Marx

(Concluded on Page 6, Column 1)



Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1949, by Business News Publishing Co.

N.Y. May Require Water Savers on All Installations

NEW YORK CITY—As another step in its efforts to conserve the city's rapidly diminishing water supply, the City Bureau of Water Register announced last week that it is preparing new regulations that will require the use of water saving devices with commercial air conditioning and other industrial cooling systems.

City officials estimated that the use of such devices to recirculate cooling water will save 98½% of the water that would otherwise be sent down the sewer.

They stated that "as conditions warrant, after the new regulations have been issued, we are prepared to shut down operations of equipment for which cooling water is not recirculated."

Present regulations require that a recirculation system be used if more than 5 g.p.m. are wasted on any air conditioning system. It was noted that during the war, some commercial equipment was installed without recirculating devices because they were not available.

Baker Elects Smith Sales Vice President

SOUTH WINDHAM, Me.—Fred W. Smith has been elected vice president in charge of sales for the Baker Refrigeration Corp., the company's board of directors announced last week.

The board also announced that J. A. Kelly had been appointed to the newly created post of manager of production for both of the company's plants here.

To take his new post, Smith is resigning his present position as products manager of merchandising equipment for Carrier Corp., which he has held for five years, the company stated.

He will assume his duties at Baker shortly after Jan. 1, 1950. He will have complete charge of all sales activities in marketing the Baker line of compressors, condensing units, and air conditioning and ice making equipment.

During World War II, Smith served as chief of the special equipment branch of War Production Board in Washington. This branch had jurisdiction over commercial refrigeration, air conditioning, food machinery, and several other allied industries.

From 1926 to 1942 Smith was with Frigidaire Div. of General Motors

(Concluded on Page 4, Column 5)

Ruling Favors IUE In Frigidaire Union Fight

DAYTON—Frigidaire plant committee men must be only those designated by Local 801 of the International Union of Electrical Workers (CIO), under a temporary injunction issued by Common Pleas Judge Calvin Crawford.

The action was another development in the jurisdictional battle between the right-wing IUE-CIO and the left-wing United Electrical Workers. The order also gave Local 801 the right to exclusive use of the union bulletin boards in the Frigidaire plant.

Robert Elsner, president of the local, brought the action. The UEW local was not represented at the hearing.

Top Administration Officials May Come Out for Excise Tax Repeal

WASHINGTON, D. C.—The possibility of altering or repealing the manufacturer's excise taxes imposed in wartime is being talked up again, cautiously by government officials and more clamorously by business spokesmen.

Secretary of Commerce Charles Sawyer, in a recent radio interview, indicated that he might "recommend" to President Truman the repeal of these taxes, which add 10% to the cost of producing ranges and refrigerators, among other things. He said: "There is no doubt that repeal of excise taxes, as would be true of any tax relief, would be an incentive to business."

Secretary of the Treasury John W. Snyder also made public statements recently that indicated that he

avored some cut in excise taxes but didn't know "whether we can do it now."

He passed the ball to President Truman who will reveal his position on taxes in messages to Congress after the first of the year.

Scott Lucas, Democratic leader in the Senate, asserted that a bill to repeal these taxes would be introduced in the Senate shortly after Congress reconvenes next month.

Lucas stated, however, that if the excise taxes were wiped out, other tax rates would have to be increased to make up for the lost revenues.

On industry's side, the Institute of Cooking & Heating Appliance Manufacturers made it plain that it was out to get repeal of the 10% tax on ranges and refrigerators in the coming year.

Walter F. Muhlbach, a member of the institute's excise tax committee, said the group was going to launch a "grass roots" campaign, whereby manufacturers, distributors, and dealers in these appliances will be urged to tell their own congressmen about the inequities of the present tax situation.

(Concluded on Page 4, Column 3)

Marts, Housewares Show To Open Soon

CHICAGO—Thousands of home furnishings and housewares buyers will start moving into Chicago early next month for the opening of the mid-winter marts and the housewares show.

Home furnishings markets will be held Jan. 9-20 at the American Furniture Mart and the Merchandise Mart. The 12th National Housewares and Home Appliance Manufacturers Exhibit is set for an eight-day run, starting Jan. 19, at the Navy Pier. The latter show will not be open on Sunday, Jan. 22.

More than 500 manufacturers have contracted for space at the house-

(Concluded on Page 4, Column 4)

Koch Concentrates On Refrigeration

NORTH KANSAS CITY, Mo.—Millard Mayer, president of Koch Butchers' Supply Co., has announced that the company is going to confine itself entirely to the manufacture and sale of refrigerators and closely allied equipment after the first of January. The supply division of The Koch Butchers' Supply Co. will be discontinued as such.

That supply division has been dealing in supplies for the meat industry, including packing houses, locker plants, and meat markets. The inventory and other assets of the supply division will be acquired by Koch Supply Co., 1930 McGee St., Kansas City 8, Mo.

Koch Supply Co. is a new organization being formed by Raymond Starr, who will resign as vice president of The Koch Butchers' Supply Co. on January 1.

(Concluded on Back Page, Column 3)

L & H Freezers Readied For January Introduction

MILWAUKEE—New Lectro-Host home and farm freezers in three sizes will be available in January, the A. J. Lindemann & Hoverson Co. here announced recently.

The company also revealed that the price range on its four-model refrigerator line will extend from \$199.95 to \$289.95. Model sizes range from 7.48 to 9.25-cu. ft. capacity.

Features of the refrigerator line include adjustable shelves and door alignment, "free-ezee" ice cube trays, and hermetically sealed internally sprung power units.

Robert Hood Elected President of Ansul

MARINETTE, Wis.—Robert C. Hood has been elected president of Ansul Chemical Co., succeeding his brother, F. James Hood, who died suddenly in New York Nov. 10. The 32-year-old new president had been named vice president less than two years ago.

Ansul also created a dual vice-presidency. Sales Director Leonard C. McKesson was named vice president in charge of sales and Arthur C. Pope was elevated to vice president in charge of manufacturing.

Robert C. Hood has been associated with Ansul for 10 years. He worked in finance, sales, advertising—interrupting his business career during the war to serve for three years as a lieutenant senior grade in the Coast Guard. He saw action at Guam, Okinawa, and other Pacific combat areas.

Hood returned to the Marinette firm upon his discharge from service in 1945 and was elected secretary.

(Concluded on Page 21, Column 5)

Serfass Becomes York Asst. Gen. Sales Mgr.

YORK, Pa.—Raymond K. Serfass has been named assistant general sales manager of the York Corp., according to John R. Hertzler, vice president and general manager of the corporation.

Serfass steps into his new position from that of industrial sales manager of the north Atlantic district, with headquarters in New York City, a position he has held since 1945.

Serfass was succeeded in this position by Alvin N. Barnes, Jr., a veteran sales engineer, who has been with the York firm for nearly 30 years.

In addition to the administrative and executive functions of his new



R. K. Serfass

Big Commercial Promotion for '50 Set by G-E

Mfr. To Stress Complete Home Air Conditioning, Hermetic Sales by Depots

By John O. Sweet

NEW YORK CITY—A four-point program built around "managed selling" has been worked out by the Air Conditioning Department of General Electric Co. in an intensive effort to enhance its position in the air conditioning and automatic heating fields in 1950.

This was revealed to approximately 450 persons representing 300 distributorships who gathered at the 48th St. Theater here Dec. 12 for the department's national distributor conference. The attendance was reported to have been larger than at any similar meeting.

As outlined by Harold F. Smiddy, vice president of the company and general manager of the department, the program consists of these points:

1. Development of packaged equipment and merchandise.
2. More simplified product lines and models.
3. Plans for promoting year-round markets.

4. The largest national advertising program directed at consumers of air conditioning products ever undertaken by the company.

During the meeting, it was disclosed that in 1950, the department's parts depots will sell G-E hermetically-sealed condensing units over the counter on the same basis as open-type machines.

Also, it was indicated that the department does not plan to add a self-contained room cooler to its air conditioning line at the present time. The department apparently intends to concentrate on year-round air conditioning of homes in the belief that this type of equipment has a far greater sales potential, in the long run, than does the room cooler.

Under the national advertising program, 24 half and full-page testimonial-type advertisements will be published in *The Saturday Evening Post* in 10 months, starting Jan. 28. Of these advertisements, 12 will be on air conditioning (eight to appear between April 29 and July 1), 10 on heating, and two on refrigeration machines.

In addition, the department will continue its regular national advertising in business publications and the trade press.

In keeping with the "managed selling" policy, the department's lines for 1950 will be basically the same

(Concluded on Page 21, Column 2)

Sanitary Refrigerator Shows New Freezer Line

FOND DU LAC, Wis.—A new line of home freezers consisting of three new "Quicfrez" models offering greater capacity and more special features was announced recently by the Sanitary Refrigerator Co. here.

Each model is built for maximum food storage space and each has a separate compartment for fast freezing. Metal food baskets are included with each unit, at no additional cost.

The wrap-around cabinets are all steel, with white Bonderized finish. Hardware trim is tailored and simple, designed for quick cleaning as well as beauty. Fiberglass insulation and the heavy-duty hermetic unit are used. No oiling is necessary.

(Concluded on Page 4, Column 4)

August Ulbert Dead; Was Alco Vice Pres.

ST. LOUIS—August F. Ulbert, a vice president of Alco Valve Co., died suddenly of a heart attack in his St. Louis hotel room Dec. 8.

Ulbert had been a veteran member of the company since he joined its sales department in 1933 and had been for years functioning as manager of the eastern sales division with offices in New York City.

He was in St. Louis on a brief visit to the company's home office at the time of his death.

NARDA Test Program In Chicago Area To Show How Fair Trade Pricing Helps Mfr. Volume by Creating Healthier Business

CHICAGO—A committee of 13 leading retailers is being named by the National Appliance and Radio Dealers Association to spearhead the Fair Trade Pricing Test Program in Greater Chicagoland, according to Clif Simpson, managing director of the association.

Officially approved by the board of directors at the NARDA 1949 annual meeting, the Fair Trade Pricing Committee will undertake the task of securing cooperation of manufacturers and distributors servicing this six county area by establishing fair trade prices and enforcing them for a test period.

Object of the test is to prove that sales volume for the manufacturers cooperating will not be reduced and that a healthier, more ethical business for all segments of the industry will be re-established.

First products to be tested under the fair trade pricing program will be refrigerators and television, according to Simpson.

First eight retailers to accept appointment to the committee include Edson M. Brook, vice president and general manager of Lord's Inc., Evanston; Dean Barelli, Barelli's Inc., Hammond, Ind.; John Bersnick, Emergency Radio & Appliance, Chicago; Leroy Rodde, Tele-Tronics, Inc., Chicago; William Maltby, Central Appliance Co., Joliet; Art Becker, Beckers Appliances, Evanston; Art

Hershberger, Hershberger's Store, Libertyville; and M. S. Dreyfus, Dreyfus Appliance & Furniture Co., Gary, Ind.

The six counties are Cook, Lake, Will, Kane, and Dupage in Illinois and Lake County in Indiana.

The wave of discount selling, industrial and back door selling that has gripped Chicago (as well as many other market areas in the nation) has driven a large number of legitimate merchants to a dangerous economic point, according to Simpson.

Majority of them are competent retailers willing to face good merchandising competition—but decidedly unwilling to continue nurturing the wave of price selling competition, Simpson stated.

PRICE WAR 'WINNERS' LOSE

Analyzing the present condition, he noted that no one can profit from continuation of price cutting and discount selling. Many good, long established dealers will be forced out of business. The "winners" of the price war will be left in deplorable financial condition.

Customers will lose because their products cannot receive the service requirements necessary from a dealer who has already lost money making the sale, he added. Distributors will lose many good, dependable, service-

minded dealers who have accounted for a large percentage of their business for many years.

Manufacturers, too, will find less and less volume going through the discount seller market and much of the prestige they have spent millions of dollars in building lost because the products cannot continually get proper representation from the discounters.

That's the long range picture the members of the National Appliance and Radio Dealers Association do not want to see come to pass, Simpson said. Many good dealers have been forced into discount practices because of their competition.

However, these merchants now are faced with the alternative of giving up the service that has been the foundation of the business and customer-relationship, or lose the necessary profit it takes to even stay in business.

A large number of merchants have been able to maintain full list prices as suggested by their suppliers and their expected sales volume through the continuous rendering of good service to their customers.

Now they are banding together in their respective communities to educate the consumer with their own cooperative dollars as to the value of buying from a respectable, dependable merchant—instead of a "fast selling" discount house that will completely forget the customer's name once the sale is made.

This series of advertisements, known as the Evanston Plan, is now being run in the local newspaper in that community. Gary, Chicago Heights, and other shopping centers in the six-county area are making plans to launch similar campaigns early in 1950.

Bevco Display at National Vendor Show



FREE DRINKS: At the recent National Automatic Merchandising Association convention in Atlantic City, the Bevco Co. drew attention to its bottle vendors by the offer of soft drinks.

Market Conveyor Rolls Meat from Delivery Truck to Storage

CLEVELAND — The self-service meat operation in the newly opened Fazio Foodtown market at Harvard Ave. and Lee Road, calls for extensive use of refrigeration facilities.

The Fazio's believe pre-packaging is the most sanitary way of selling meat. In their method, the meat never becomes warm enough to permit the growth of bacteria.

Meat, delivered in special trucks, is hooked on a rail then enters the 34° meat cooler. It is cut and wrapped in the packaging room, which is kept at a steady 58°.

Then it is returned to the cooler, or cellophane wrapped, placed in 32° temperature in the self-service display cases.

In this way, surfaces of meat are never exposed to hot air. Eleven women help package meats and slice prepared luncheon meats.

Behind the scenes at the new market are 5,000 sq. ft. of storage space. Merchandise is pushed directly from delivery trucks to storage rooms via a roller-type conveyor belt.

Produce is kept at a temperature of 38° and special equipment is provided to keep citrus fruits moist. Two blowers operate constantly in the vegetable storage room.

The frozen foods storage room, where the temperature always is 0° F., is one of the largest in the city, measuring 9 by 16 ft.

Motorola-Chicago Named Gibson Line Distributor

GREENVILLE, Mich.—J. L. Johnson, general sales manager, Gibson Refrigerator Co., has announced the appointment of Motorola-Chicago Co. as Gibson distributor for the Chicago area.

Motorola-Chicago is setting up a sales organization for Gibson refrigerators, ranges, and home freezers in the 16 counties surrounding Chicago, Johnson said.

D. M. Lucas, vice president of Motorola-Chicago, heads up Gibson's new distributorship. S. R. Herkes is sales manager.

W. H. Browne, Gibson divisional sales manager, headquartered in the Chicago Furniture Mart, will work with the new distributor.

Checkup Shows Use of Ice Cubers Rising In Omaha

OMAHA, Neb.—More than 70 units of one make of an automatic ice cube maker have been installed in Omaha bars, hospitals, restaurants, and hotels since the devices were introduced in the city a year ago, reports Harold H. Hartman, vice president of the Omaha firm distributing the machines.

Meanwhile, local ice manufacturers have indicated that advent of the cube-making machines has cut deeply into their solid ice cube business in Omaha. Last year, for example, the Omaha Ice & Cold Storage Co. sold 59,652 tubs of cubes through mid-November, with each tub holding 42 pounds, reported President Fred J. Rueth. This year the volume for the same period dropped to 38,961 tubs.

"Formerly we sold one private club \$400 worth of cubes a month," declared Rueth. "But they bought a cube machine and now we're lucky to sell them \$35 worth."

Tekni-Craft To Make Freezers at Rockton

BELOIT, Wis.—After being manufactured here since 1926, Taylor ice cream freezers will now be made in Rockton, Ill., four miles south of Beloit, Tekni-Craft has announced.

One of the largest quonset-type buildings in this part of the country has just been completed for this purpose, and is already in use. General offices and other departments will move to the new site on Dec. 19. Although some parts will be manufactured in Beloit for a few months, headquarters and assembly will be at Rockton.

Plans have been completed for a large modern factory building on the Rockton site to be started early in the spring of 1950. The new building will be "the largest ever used for the manufacture of ice cream equipment exclusively," and will contain all of Tekni-Craft's manufacturing and office facilities, according to the company.

York Distributor Appointed

LITTLE ROCK, Ark.—General Air Conditioning Corp., 122 E. 3rd St., has recently been appointed authorized York distributor by the York Corp.

Locker plants

Cold storage rooms

Freezer rooms

Walk-in coolers

Refrigerators

Frozen food cabinets

Steel partitions

Show cases

Telephone booths

Truck bodies

House trailers

Ovens (industrial)

Stoves and ranges

Ships

Fruit and vegetable storages

Farm freezers

Milk coolers

Picnic kits

Water jugs

National Gypsum Co., Dept. A-913, Buffalo 2, N. Y.
Gentlemen: I am interested in finding out how Gold Bond Zerocel can do a better insulation job for me. Send me a free copy of your new booklet, "Fireproof Refrigeration Construction".

Name Mfr. of
Company
Street State
City

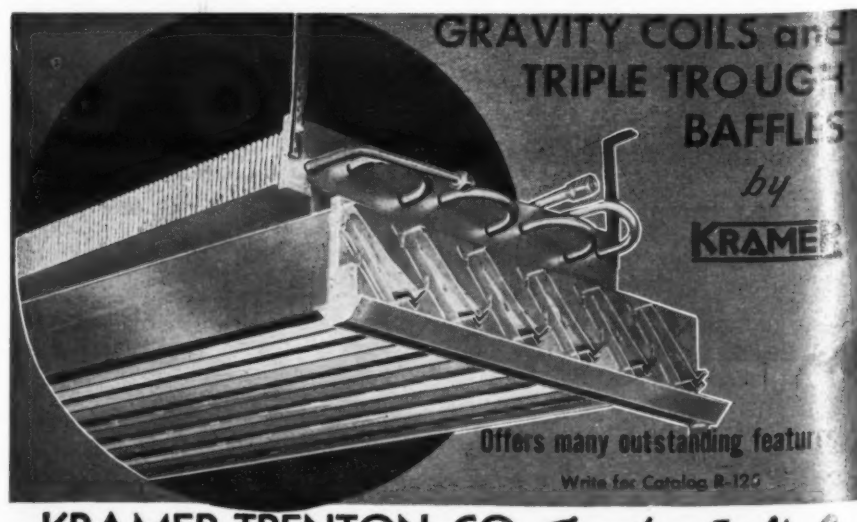
Mail this coupon today for the answer to your low temperature insulation problems!

HERE are some typical installations in which Gold Bond Zerocel gives top insulation performance at lowest cost. Clean, easy-to-install Zerocel is completely fireproof and stands up best in service. Mail the coupon today for the complete story on how Zerocel can solve your low temperature insulation problem!

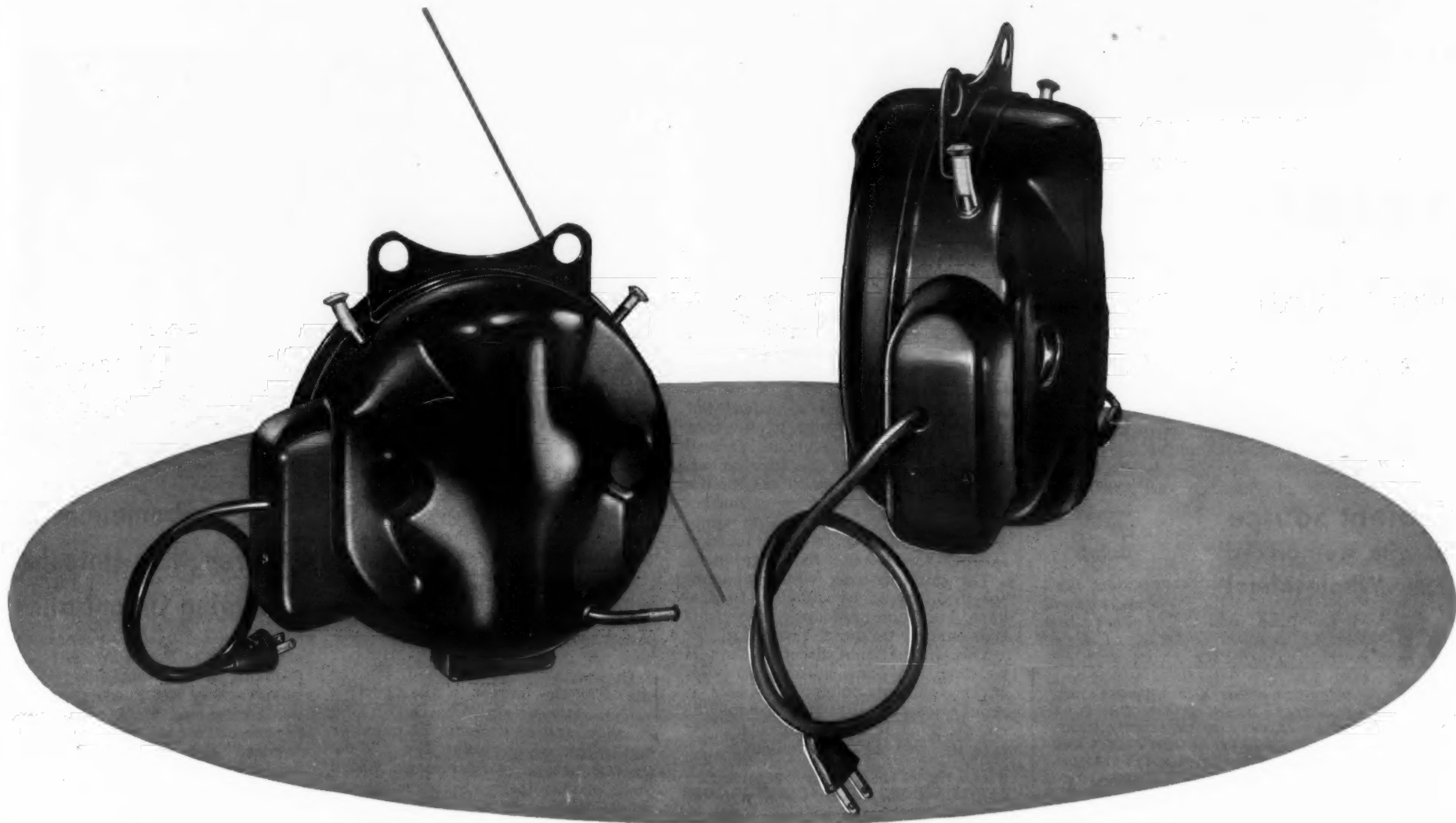
- Efficient, "K" factor of 0.24 BTU at 60°F.
- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Easier application



**GOLD BOND
ZEROCCEL
INSULATION**



KRAMER TRENTON CO. Trenton 5, N. J.



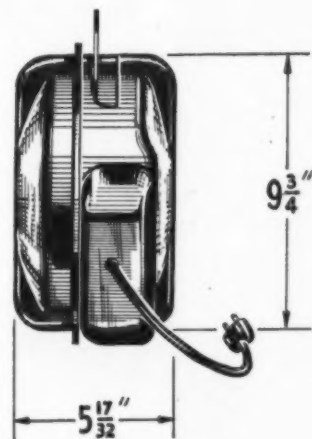
THE TECUMSEH

COMPACT

The Ideal Hermetic Motor Compressor for Limited Space Applications

WHERE limited space is a problem, look to the Tecumseh Compact for the perfect answer. Only $9\frac{3}{4}$ " high, only $5\frac{17}{32}$ " thick, it permits *increased* food storage space, with *no increase* in cabinet dimensions . . . The Tecumseh Compact is a single cylinder, 1/9th horsepower hermetic. In combination with various types of condensers and evaporators, the Compact will efficiently refrigerate systems ranging in size all the way from small apartment or trailer boxes up to eight cubic foot domestic refrigerators—also many light commercial appliances . . . Internal spring mountings, forced feed lubrication, automatic cylinder wall lubrication, and other famous Tecumseh engineering features assure smooth, quiet, long-lasting performance . . . Write for literature.

For versatility of application the Tecumseh Compact has no equal. It may be suspended on the back of the cabinet or placed in a depression or offset in the cabinet liner, thus allowing the food storage compartment to be lowered practically to floor level. Result: *increased* storage capacity, *no increase* in cabinet size.



Chieftain



TECUMSEH PRODUCTS COMPANY

TECUMSEH, MICHIGAN

Export Dept., 2111 Woodward Ave., Detroit 1, Mich.

WORLD'S LARGEST

INDEPENDENT PRODUCER OF COMPRESSORS AND CONDENSING UNITS FOR THE REFRIGERATION INDUSTRY

demand DETROIT CERTIFIED VALVES and CONTROLS

THE ONLY NAME
THAT BRINGS YOU
ALL 3

For One Convenient Source
Deal with Authorized
DETROIT Wholesalers!

DETROIT
LUBRICATOR COMPANY

5900 TRUMBULL AVE.
DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR &
Standard Sanitary Corporation
CANADIAN REPRESENTATIVE: RAILWAY
& ENGINEERING SPECIALTIES, LTD.,
MONTREAL, TORONTO, WINNIPEG



DETROIT HEATING AND REFRIGERATION
CONTROLS • ENGINE SAFETY CONTROLS •
FLOAT VALVES AND OIL BURNER EQUIP-
MENT • DETROIT EXPANSION VALVES AND
REFRIGERATION ACCESSORIES • STATION-
ARY AND LOCOMOTIVE LUBRICATORS

Serving home and industry AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS
DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON



Excise Tax Repeal--

(Concluded from Page 1, Column 4)

"There is positively no justification for lifting the tax on sweepers and washers and retaining it on stoves, which are just as essential," Muhlbach asserted.

He noted that the original purpose of the taxes was to discourage the use of steel for household goods during wartime.

"The period is long past when any tax is needed to discourage sales in any commodity," he insisted. "To the contrary, everything possible should be done to encourage sales all along the line."

The National Association of Manufacturers also would like to see the present excise taxes repealed, but this group came up with a plan that would retain the revenue derived from these taxes for the government.

The NAM would substitute for the present taxes a uniform manufacturer's excise tax that would apply to all end products of manufacturers except food and food products.

The uniform rate, which was unspecified, should be sufficient to produce the same amount of revenue that current taxes are providing.

The association's directors, in forwarding the plan, stated, "In view of the current budget prospects it should be plain that there should be no thought of an outright loss of revenue without replacement."

Lyons Opens 2nd Toronto Store

TORONTO, Ont., Can.—Lyons appliance store, 522 Yonge St., has opened a second store at 365 Weston Rd.

Baby, It's Cold Inside



This 8.27-cu. ft. Quicfrez home freezer measures only 36 in. high, 27½ in. wide, and 50 in. long but it holds as much as 415 lbs. of meat. It retails at approximately \$279.95 and is manufactured by Sanitary Refrigerator Co.

Sanitary Freezers--

(Concluded from Page 1, Column 5)

Quicfrez models have lightweight balanced table-top lids to make opening and closing easy. Foodstuffs are easily manageable because the cabinets are only 27 in. deep.

Up to 825 lbs. of food can be stored in the largest of the Quicfrez models. Measuring 36 in. high, 27½ in. wide, and 82 in. long, its capacity is 16.8 cu. ft., including the 1.76-cu. ft. fast freeze compartment. Retail price of this large-size model is approximately \$459.95.

The 12.5-cu. ft. model is 27½ in. wide, 36 in. high, and 61 in. long and has all the features of the larger model. Its retail price is approximately \$352.50.

The smallest of the Quicfrez units holds over 400 lbs. of food. This 8.27-cu. ft. model is 36 in. high, 27½ in. wide, and 50 in. long and retails at about \$279.95.

Marts, Housewares Show--

(Concluded from Page 1, Column 3)

wares show, which is sponsored by the National Housewares Manufacturers Association. This will make the event the largest yet, and a record attendance is anticipated.

Several appliance and housewares firms will be exhibiting at the home-furnishings markets for the first time. New exhibitors at the American Furniture Mart will include International Harvester Co. and Rainier Co., while Murray Corp. of America has taken space at the Merchandise Mart.

These companies, along with most of the other appliance manufacturers taking part in the event, will display their 1950 lines. Many of the appliance models will be shown for the first time.

York Names Serfass--

(Concluded from Page 1, Column 4)

position, Serfass will, in the absence of Hertzler, assume the authority and make such decisions as would ordinarily evolve upon the general sales manager.

Serfass was born in Allentown and educated in Mercersburg, Pa., graduating cum laude from Lehigh in 1932, with a B.S. degree.

During 1932-34, he gained valuable field experience in the New York City and Newark offices of York Corp. This was followed by a special factory training course at York, Pa. in 1934-35, after which he returned to the Newark office in the capacity of sales engineer.

From 1937 until he was appointed industrial sales manager of the north Atlantic district, Serfass served as sales engineer of the Rochester branch office. He took over his new duties at the York factory in York, Pa., on Dec. 2.

Barnes, also a native of Pennsylvania, was reared and educated in Terre Haute, Ind., taking his B.S. degree from Rose Polytechnic institute of that city in 1919.

Barnes took the student training course at the York factory during the period of 1920-23. Upon completion of the course he was assigned to the Charlotte, N. C., branch office as a sales engineer, remaining there until he was transferred to the New York City office in 1934.

In 1942 he was assigned to the Philadelphia district office where he was given charge of an immense project for the York firm and consequently received considerable valuable experience. In 1945 he returned to the New York branch office.

Series of Promotions Aims To Strengthen Hotpoint Marketing Organization

CHICAGO—Following a series of promotions and personnel shifts made to strengthen and coordinate marketing programs, F. J. Walters, vice president of Hotpoint, Inc., announced the company's completed marketing organization.

Divisions of the department directly related to merchandising and selling under sales manager E. R. Taylor include the field organization, merchandising division, and key account specialists.

Other sales units including product divisions, the utility division and building division, will report to Walters. The managers of the product divisions: R. C. Cameron on electric kitchens; D. J. Irvine, range and water heaters; F. M. Slasor, refrigeration, and L. I. Sweetland, home laundry, have been designated staff assistants.

Taylor announced that W. E. Macke is manager of the merchandising division with section heads being Mrs. S. M. Andrews, manager of Hotpoint Institute; J. C. Buggle, manager of merchandise materials; H. C. Doss, sales promotion manager; R. S. Holtzman, advertising manager; and C. H. Smith, sales training manager.

The field organization managers essentially unchanged are: H. J. Scaife, San Francisco district manager; D. W. Rennewanz, Seattle; F. L. Cashman, New England; J. S. Hicock, New York; H. B. Cromleigh, Atlantic; F. B. Williams, Southeastern; J. E. Brickenden, Great Lakes; A. A. Borgemenke, Cincinnati; M. K. Brody, North Central; J. N. Thompson, Central; and M. M. Mowbray, Southwestern.

Operating from the Chicago headquarters as key account specialists will be D. E. Anderson and E. J. Sorenson. J. F. McDaniel has been promoted to assistant sales manager.

Walters said that E. E. McEwan has been named his assistant in the new setup. The new electric utility division is headed by D. R. Anneaux with a staff which includes W. L. Leavis, A. W. Peterson, J. A. Bell, A. H. Jaeger, and E. R. Sigler. The building division is headed by L. E. Stratton.

Baker Elects Smith--

(Concluded from Page 1, Column 2)

Boston office. He started as a retail sales representative and from 1926-1942 was commercial sales manager for the New England district. He has served on various committees of both ACRMA and Rema.

Kelly has been connected with Baker since June actively in charge of moving the machine tools and other equipment to the newly acquired Little Falls plant.

The move of the Omaha and Madison Falls plant machinery to the Baker Little Falls plant is practically completed and compressor and condensing unit production increasing daily.

For nine years prior to joining the Baker organization, Kelly was manufacturing manager for Todd & Brown, Inc., engineers of New York.

Unit Heating Files In Buffalo

BUFFALO—A business name has been filed in the Erie County clerk's office for the Unit Heating & Air Conditioning Co., 1442 Jefferson St., here, by Joseph A. Rose.

THE WORLD'S

leading appliance manufacturers are listed among Grand Rapids Brass customers. Because in building the

FINEST

products, in terms of quality and value, it is only natural that they select hardware for their

APPLIANCES

that will continue to look like new and function perfectly through long years of service — hardware which will

HAVE

such customer-attracting features as smart, modern designs, beautiful chrome-plated finishes, and locks with "Living Action" which assure easy dependable operation.

GRAND RAPIDS BRASS

will be glad to estimate your needs in commercial, domestic refrigeration hardware, stove hardware and nameplates for all kinds of appliances...

HARDWARE

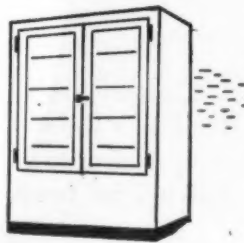
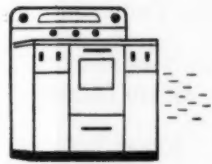
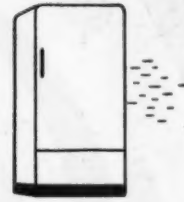
that will give you and your customers assurance of satisfaction, outstanding quality and workmanship.

Manufacturers of hardware for COMMERCIAL REFRIGERATORS, DOMESTIC REFRIGERATORS, GAS STOVES, WASHING MACHINES, ELECTRIC RANGES

DIVISION OF CRAMPTON MANUFACTURING COMPANY

Grand Rapids Brass
COMPANY

GRAND RAPIDS 4, MICHIGAN



Satisfied Customers Receive 5% Commission on Appliance Sales Made to Friends They Invite to Demonstration in Their Homes

VICKSBURG, Miss. — Offering satisfied, previously-sold customers a 5% commission on appliance sales to their friends sold through "home demonstrations" in the owner's home, has opened up a profitable new market for Mississippi Hardware Co., large appliance dealership here.

The plan was developed by J. E. Peterson, manager of the store, to augment scheduled demonstrations which the store holds twice a week in its model kitchen and a small auditorium.

Finding intense interest in this type of demonstration, Peterson hit upon the idea of offering previously-sold appliance customers a worthwhile commission, for staging similar demonstrations in their homes.

"Under the plan, any person who bought any appliance whatsoever from us is entitled to apply for a demonstration party," Peterson said.

"Her responsibility is to select five or six interested housewives in the area, whom she feels might be sold a new refrigerator, range, washing machine, or home freezer.

"We schedule the demonstration for whatever hour seems best, and furnish refreshments in the form of a light tea or luncheon, for the guests.

"We then send out our own uniformed home economist, to handle the demonstration, who puts each appliance through its paces, in the way which best fits the situation.

"Inasmuch as we invariably have the enthusiasm of the appliance owner as a selling tool, each of these demonstrations has shown an exceptionally high return."

Some prospects have earned as much as \$50 from thus allowing their homes to be used for such demonstrations, according to the Mississippi dealer.

With many housewives operating on tight budgets, this novel plan has aroused high interest, and there are actually more women willing to cooperate than the store anticipated.

The Vicksburg store is one of the

oldest users of the "demonstration theory" in the city.

All of the twice-weekly demonstrations held to date have been "sell-outs" according to Peterson. He uses the visits as an opportunity to show off his 4-mechanic repair department in the rear of the store, and his large stock of parts which makes it possible for Mississippi Hardware to maintain everything it sells.

As an idea of how far the dealer has gone to implement this type of promotion, he has even set up a nursery, which encourages mothers

of small children to bring the kiddies along to enjoy playing with toys and work materials while their mothers sit in on appliance demonstrations.

Peterson also has arranged to pay a worthwhile commission to all employees of the store, even those in non-selling departments, who ferret out appliance prospects, and turn them into the sales office.

Two per cent is paid to each such employee—and this idea, too, has helped to swell major appliance receipts.

Serving Refreshments Builds Goodwill, Focuses Attention on Model Kitchen

BALTIMORE—Serving a plate of ice cream and cookies with a cup of fresh coffee, to every customer who walks into Gomprecht & Benesch Furniture Co., major appliance dealer here, has a lot to do with the successful merchandising of complete electric kitchens, the store management has found.

The long-established Baltimore store, which operates one of the city's most completely-equipped demonstration kitchens in the rear of the appliance department, has been using this plan for over a year, according to Ed Benesch, store head.

Instead of using the model kitchen only for sporadic demonstrations, and cooking classes, Gomprecht & Benesch keeps it in constant operation. A full-time home economist is on duty cooking through the day.

The foods prepared are produced in such a stream that it is possible to offer a sample refreshment to every customer moving through the store, whether they came in specifically for an appliance demonstration or not.

The complete electric kitchen contains a home freezer, range, automatic dishwasher, cabinet sink, garbage disposal machine, refrigerator, mixer, roaster, clock, and many other appliances.

The store handles special demonstrations almost every day, inviting prospects by means of direct mail, newspaper, and radio.

Women who visit the kitchen are all given a book of special recipes developed by the store's home economist, and invited to give their names and addresses, to receive these regularly.

The store gets about a 90% response to this offer, and the number of recipes mailed out weekly has gone well over 1,000, it was pointed out.

While during cooking schools and demonstrations of this nature deal with heavy foods, during all other production periods, the electric kitchen attempts to turn out strictly "dessert items"—such as cakes, cookies, pastries, and ice cream frozen in either the home freezer or refrigerator.

A stock of cups, saucers, plates, and salad plates, is maintained in the cabinets over the sink, which, after use, are washed in the model kitchen automatic dishwasher, "while the customer watches," if possible.

Gomprecht & Benesch feels that it can trace the sale of scores of major appliances entirely to goodwill created by the surprising free offer of refreshments—many such sales actually developed from people who had no intention of buying new appliances, but whose interest was focused by the gift.

"Our model kitchen, in this way, is actively operating, and making sales, during all store hours," Benesch smiled.

"We feel that the pleasant fragrance of foods being cooked speaks untold volumes of words, to the store

Atlantic City Requests Lead to 220-Volt Robco Commercial Meter

NEW YORK CITY—As a result of suggestions made at the recent All-Industry Exposition, a 220-volt Robco commercial "Collectometer" for time-payment selling is now being produced and three new features have been incorporated in the device, it was announced by William J. Doherty, Inc., national distributor.

A price of \$16.95 has been set on the 220-volt meter, which is available for immediate delivery. The price of the 110-volt meter remains unchanged at \$15.95.

New features of the Collectometer include a delinquency arrangement and a greater range of daily charges on the one cam. In addition, the coin collection box has been enlarged to hold \$180.

With regard to the increased range of daily charges, Doherty explained that "our model 'A' starting with 50 cents and with 50-cent additions will go up to \$5, and the model 'B' has a range of 25 cents to \$3 with 25-cent jumps." Either one of these models, it was pointed out, "will give the user the complete range of charges that are used in time-payment selling."

K & K To Handle Deepfreeze

OMAHA, Neb. — Appointment of K & K Co. as distributor for Deepfreeze Div., Motor Products Corp., has been announced by H. K. Ekberg.

Hoffooting Serviceman Soothes Ruffled Feelings

LOS ANGELES — May Co.'s department store here maintains a "goodwill service representative" whose sole responsibility is to answer emergency calls from refrigerator owners.

Under the plan, a cooperating refrigeration service firm repairs and resells trade-ins and handles all guarantee work for the department store.

However, the service is often "not fast enough for the average housewife," it has been found. Therefore, a veteran refrigerator mechanic is kept on the payroll, exclusively to soothe down the ruffled feelings of customers.

Whenever a woman calls in excitedly, and states that her refrigerator is over-freezing, won't start, is defrosting too often, etc., the May Co. sends its "goodwill representative" hoffooting out to take care of the trouble.

If something serious has developed with the box, it is, of course, transferred to the full-time service firm for attention.

In about 75% of the cases, however, it has been found that a simple adjustment will take care of the difficulty.

As a result, the May Co. has kept dissatisfaction at a minimum and quite frequently, housewives are pleased enough over the celerity with which their calls were answered to comment favorable about it to their friends.



Distributor Appoints Houck As Crosley Sales Manager

BOSTON — H. B. Vaughan, vice president of Wahn Distributors, 674 Commonwealth Ave. here, has announced the appointment of Ted M. Houck as Crosley appliance sales manager.

Houck was previously regional representative for the Crosley Div. of Avco Mfg. Corp. in the New England territory.

LOOK!... Paragon DEFROSTING TIME SWITCHES NOW AT LOWEST NET PRICES!

SERIES 300-M
ONLY \$17.00 LIST



FOR ALL TYPES OF COMMERCIAL REFRIGERATOR DEFROSTING:

Electric Heat • Hot Gas or Compression Shutdown

for UNIT COOLERS • FROZEN FOOD DISPLAY CABINETS • REACH-IN CABINETS • WALK-IN BOXES • LOCKER PLANTS • FUR STORAGE VAULTS

See your jobber or write for free bulletins and installation data.

Paragonelectric COMPANY

1687 12th STREET • TWO RIVERS, WIS.

America's Foremost exclusive manufacturer of Time Control Switches for all uses, including "de-frost-it" for domestic refrigerators, only



\$9.95

5,000 SQUARE FEET OF STORE AND WAREHOUSE SPACE

The Supply House That Service Built



Everything you need in REFRIGERATION, AIR CONDITIONING, HEATING PARTS and SUPPLIES

Save time and energy... order from our new catalog. Efficient same-day service, from men who know your business. Keep your stocks complete from our stocks. Wholesale only.

SERVICE PARTS CO.

2511-2611 LAKE ST. MELROSE PARK, ILL.

OPERATES IN ANY POSITION—shaft up, down, horizontal, or any intermediate position.

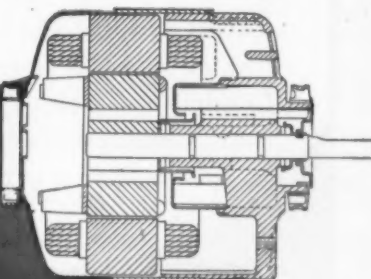
A new lubrication system constantly circulates oil between shaft and bearing, regardless of the position of the motor. Oil-saturated packing continuously feeds bearing with filtered oil—no additional lubrication required throughout its long, service-free life.

Quiet and light weight—extremely low noise level. Die-cast aluminum housing reduces weight. Bearing surfaces machined in one set-up—gives permanently true alignment.

Versatile—variety of mounting arrangements available; as well as variable-speed operation by using suitable controller.

Ask your nearest G-E sales representative for details. Apparatus Department, General Electric Company, Schenectady, New York.

UNIT-BEARING MOTOR



GENERAL ELECTRIC

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
variety. And Socialism, as the thinking know, is nothing but the stalking horse for Russian Communism.

"Of course, the Trumanites will be wounded by such description of their machinations, and loudly protest that they want to keep on working within the framework of the American capitalistic system, but to merely liberalize that system for the 'welfare' of more people. In short, they want to mix a little socialism with our proven capitalism. Socialism, unfortunately, will no more mix with capitalism than will oil with water. It is foolish to try to camouflage the real purpose of the Truman administration with a cloak of modified capitalism. It is Socialism, pure and simple. Clement Atlee, titular head of Great Britain's Socialist Labor Party has said that he can see virtually no ideological differences between the Fair Deal of Mr. Truman and the Labor Party Socialism of Mr. Atlee himself. This seems a reasonable conclusion when one remembers that both programs came directly out of a book by Karl Marx.

"The Truman Socialists in Washington are using all the Marxian recommendations. They are inflating the currency and putting the nation so deeply into debt, that eventual bankruptcy will result. They are

building up power in the labor unions, fomenting hatred between those who employ and those who are employed. And finally they are building up a vast Washington bureaucracy, on which they can continually depend for support. All of these things are directly out of Comrade Marx's writings.

"If the Marxian parallel is not sufficiently convincing, we suggest that you go back over the platform of Norman Thomas's American Socialist Party for the past two decades, and see what that party has advocated. After carefully studying the things for which the Socialist Party in America has stood, then see how many of their earliest objectives are still unattained. The answer will surprise you, because the combined efforts of the Roosevelt New Deal and the Truman Fair Deal have enacted into law each and every one of the planks of the Socialist Party platform of 20 years ago.

"Having given the Socialists every one of their desires during the past 20 years, and using Karl Marx's famous book as a guide to the future, the Trumanites have certainly qualified, without doubt, for the title of SOCIALISTS. And it is this title that we unflinchingly bestow on them from now on—SOCIALISTS!"

From Our Mailbag

Longford Engineering Co., Ltd.
Refrigeration Engineers
Bognor Regis, Sussex, England
Editor:

Industry represents to everyone directly or indirectly the source of livelihood. It is no less true of the nation as a nation than of any one of us individually.

Just as it is recognized that one essential to successful and prosperous industry is wise and far-seeing management, so another essential is the understanding by the workers of the work on which they are engaged, and its products, and the realization by the local community—whether it is the general public, the traders, the local government authorities, or the housewives whose husbands are engaged in the industry—of the fact that local industry is an integral part of the local community and that very often local industry has been responsible for the creation and development of the local community.

We have in Bognor a factory manufacturing a product which might one day become World Known (if it had the proper backing in its early stages), and make this town famous for its products. Something of which the residents can be very proud, a product which might be in nearly every kitchen throughout the world. Can we start from there? Local industry does not tell its own story, is often underrated, is not always accepted at its full value. But on the other hand, every man and woman and young person in a local community knows his or her local newspaper, accepts it, trusts it, and looks forward to the next issue. Like coal industry the local newspaper is an integral part of the local community. The local newspaper is as local as the factory whistle.

The industrialist has not always welcomed the newspaper approach for factual information. Yet the local industry employing 200 or 1,000 people must surely have at least as much news about itself that it can tell as the little mission church

around the corner. Many industrialists are helpful to the Press, others are reticent, and some, like ourselves, are a little afraid of the Press. But as members of the one local community, local industry, and local newspapers have a great deal in common; their common desire is to see the development and the well being of that local community, it is to the advantage of the community that local industries shall prosper and that where it is possible for them to expand in home and export markets there shall be no obstacle in the way but every possible assistance shall be given to them.

In order to encourage productivity which means new ideas, new inventions, new methods, many a firm is incurring heavy expense in the provision of amenities, canteen, welfare arrangements, and it becomes necessary therefore through other channels of publicity to reach the people at home and to help to interest those other members of the family in the work that is going on in the factory. Taking an even broader view we know from experience that in some districts the statutory authority is not always helpful to industry.

All manner of difficulties are encountered by the industrialist because the members of that local authority have not had an opportunity of studying the facts at their leisure.

We have, it would seem, reached a stage when it is not enough for an industrialist to be a good employer. He needs to make it known among the young people and through his own employees and also through other channels, that employment in his factory is something very pleasant and profitable, that he is a good employer, and that he directly and indirectly is making a very substantial contribution every week and every year to the prosperity of that community. He needs, in other words, to be appreciated at his full value.

What efforts are made by us to make our employees work conscious and to encourage them to take pride in the job they are doing? How many entertainment caterers or retailers really appreciate that their turnover may be partly provided for them by local industry? How many local government authorities fully realize that, although industry itself has the benefits of derating, the ingenuity and the success of those industrialists is ensuring continual wage bills which will enable tens of thousands of people to provide local government with its wherewithal for the maintenance of local public services and the increase of amenities.

How can local industry begin to educate its own local community? The industrialist may say that his business is his own concern and cannot interest the man outside. The fairly general opinion today, I venture to say, is that industry is everybody's business and that the success of industry is a national concern. We now feel, if we talk about ourselves, that we may create throughout the country as a whole a different outlook.

We are trying everything today in our small way for better and closer understanding and everything seems to have been tried—works relations, public relations, amenities, shorter working hours—everything except the one thing that probably matters and that is the inspiration and development of mutual confidence between industry and our local community.

In the United States, from which country I consider everyone of us today can learn, they conduct a great amount of what the Americans call "Plant City Advertising." The underlying purpose of that form of advertising by an industrial concern in its own town is to increase the mutual confidence between industry and the community.

Americans have realized that it is essential first of all to have complete understanding between local industry and local community, as representing not only the present actual labor force but also the potential labor supply.

We have to enlist the employment of certain key labor not obtainable locally such as laboratory chief, foundry foreman, physicist, building foreman, and chief inspector, etc., and our method was, among other things, to offer the chance of living accommodation as we have at our disposal the means of building a few houses for these key workers in a quick, cheap, and economical manner. See the houses we put up quickly in Mansfield Rd. and Sherwood Rd., and all sold for 1,200 pounds and 1,300 pounds, at a time

when practically everybody was wringing his hands and bewailing the fact that it was impossible to build houses, and the only solution was the ridiculous pre-fabrication fiasco.

In building these houses and, in fact, building our factory at all it seems to be considered opinion we have committed some form of crime, and today while outwardly we are told we are receiving every possible help, the following are the actual facts.

Approximately 18 months ago we applied for a license to build a further 10 houses for these mentioned key workers, all who would have been very pleased to pay down the small deposit required by a Building Society to enable them to buy their own house at a lower rental than is to be charged to the future tenants of the present day council houses being put up around us. In cases where our people could not afford the initial deposit we had a scheme for lending them even this small sum, and this in fact was operated very satisfactorily in several cases in Mansfield and Sherwood Rd. After many months of the great help we were receiving from all authorities concerned we could see we were getting nowhere. Approximately nine months ago more or less forced the issue to the stage where it was agreed we could build these houses providing we formed a housing society, which on the face of it seemed to offer a reasonable solution, at any rate to get a few houses up but in particular for one person, our laboratory chief, who daily worried me to implement my promise that was given in good faith, based on knowledge of all the help I was promised from the authorities. One of the conditions put forward was that two members of the council were to sit on the board of the Housing Society, which was to be a non-profit organization but of course any losses incurred would fall immediately on the factory promoting the whole thing.

After going to all the expense and legal formalities involved to form the Housing Society with the usual considerable lapse of time the first meeting was called when the two originally proposed members kindly told us they could not sit on the board, someone apparently having objected, but they suggested it was probably better as they would keep in the background and give us even more help than originally intended, having by this time seen what a deserving cause it was. This was approximately six months ago, and since then we have been knocking our heads quite unavailingly against a brick wall, with one condition after another being imposed or thought of despite the fact we had every cooperation and help on the face of it.

We actually reached the position when, off the record, we were advised to start, and did so, reaching a stage of practically finishing the footings on three houses in Sherwood Rd., on sites which, in our opinion, could not be considered other than "ripe for development" and for which the owners were charging us, per plot, exactly what they had paid for them, which in our own business minds was a fair and reasonable basis.

We took the risk of starting these houses in good faith as we had been trying to get the Land Development people along, who, incidentally, are only in Havant, to give us an idea of their opinion, but it was only after we had nearly had a fight on the phone, that they showed any life and sent a man along. A few days later, about five weeks ago came the final bombshell. A 230-pound charge on each plot to be paid in advance before a license could be considered.

This finished us and the whole project has been abandoned, I don't want to know anything more about Housing Societies and we have now withdrawn all our building material from the site.

I am not sure if we are still receiving the considerable help all along referred to, as I am no longer interested, but I notice we have not even been asked what has happened or as far as I can see the slightest interest been shown, so now I wish I had encountered keen opposition to everything in the first place instead of this great friendliness and willingness to help which deceived me.

Meanwhile, our laboratory chap has decided he cannot wait any longer and is leaving us and we have to rebuild all the good work we thought had been done in setting up our laboratory.—C. R. PURLEY, L. E. C. Factory, Shripney, Bognor Regis.



BAKER AMMONIA COMPRESSORS
and
CONDENSING UNITS

Dependable Performance
Proven by 44 Years Experience

Refrigerating Engineers have learned to depend upon BAKER Ammonia Compressors and Condensing Units for sustained maximum output and long life. The line includes 9 compressor models, 2 to 125 HP; also 4 Ammonia Booster Compressors for two-stage compression on extreme low temperature applications.

Baker's long experience, expert engineering, and enlarged manufacturing facilities insure the finest quality — plus prompt deliveries.

and tie up with the Complete Baker line

which includes Shell and Tube Condensers and Liquid Coolers (1 to 250 tons capacity); Valves and Fittings for Ammonia and Freon; Commercial Ice Making Equipment. A long line of FREON Compressors and Condensing Units, 1/2 to 60 HP capacity; Evaporative Condensers, Heat Transfer Products; Baker "ICE-FLO" Ice Cuber line, and "packaged" Air Conditioners for location and central station installations. Write for literature and information regarding territories now open to Distributors seeking a liberal franchise.

BAKER REFRIGERATION CORPORATION

General Offices: South Windham, Maine
Factories at Omaha, Nebraska and South Windham, Maine

'Wrap It Up for Winter,' Dealer's Postcard Warns

DETROIT—A last minute reminder to those who might have forgotten to put their air conditioning units "in wraps for the winter" was mailed early in December by the A. V. Cuthorn Co., local air conditioning dealer.

The mailing, in the form of a 3 in. by 5 in. postal card, was sent out under the signature of Allen Dean, sales manager. The message, which took up the entire face of the card, read:

"Are you one of those responsive persons who heeded our October warning to put your air conditioning in shape for winter?"

"I mean, pump down the 'Freon'; close off water; paint condensate pan and rust spots inside cabinet; lubricate fan and motor bearings; check fan belt and filters. If you didn't, remember:

"\$5.50 gets you all this expert attention for a package unit; central station units come a little higher, depending upon size.

"Our 24-hour-a-day, 7-day-a-week service department is experienced on all makes—not just Chrysler Air-temp, our sales line.

"Get your conscience clear on air conditioning by calling us today at TEXAS 4-7000 to wrap-it-up-for-winter. Nights: WO 3-0332."

Miami Beach Auditorium

Cooling To Cost \$213,000

MIAMI BEACH, Fla.—A \$213,000 contract to air condition Miami Beach's new municipal auditorium has been awarded to the Miami Roofing & Sheet Metal Co., low bidder in a field of five firms.

City officials said deadline for installation of the equipment is July 1, 1950.

Other bidders on the project included Conditioned Air Corp., \$215,000; Giffen Roofing Co., \$223,987; R. & S. Engineering Co., \$222,990, and Hill York, \$268,711.

Nichols Files Business Name

BUFFALO—A business name has been filed in the Erie County clerk's office for Nichols Radio & Appliance, Genesee and Stutzman Road, Bowmansville, N. Y., by Harold R. Nichols.

Neb. Beer Wholesalers Oppose Free Coil Service For Retail Outlets

LINCOLN, Neb.—Nebraska Beer Wholesalers Association has filed an application with the state liquor control commission asking for revocation of regulation 44, a rule recently announced by the commission authorizing manufacturers, distributors, and wholesalers to furnish coil cleaning service and certain other considerations to retailers. The regulation had been approved in an opinion by Attorney General James Anderson.

The petition points out that state laws prohibit retailers from "receiving money or anything else of value from any person engaged in wholesaling beer," and charges that the commission has sanctioned violation of federal and state statutes. It is asked that operation under the rule be suspended until a hearing can be held.

Attention is further called in the petition to the Robinson-Patman act of the federal government which prohibits giving discounts to one purchaser or another.

The wholesalers contend that the commission regulation "places all retailers and wholesalers of beer in a position that they must either violate the statutes or be subjected to unfair competition."

In an interpretation of the state statutes, directly opposed to the new ruling, the commission suspended the licenses of several Nebraska wholesalers who helped retailers get refrigeration equipment.

Food Certificate Given Away with Appliance Sale

CHEYENNE, Wyo.—D. & R. Appliance Co., 1616 Pioneer Ave., has announced a new merchandising policy wherein \$20 worth of free groceries, including a 14-lb. turkey, will be given with the sale of any refrigerator, gas or electric range, washer, sewing machine, or ironer.

The firm also will give \$50 worth of meats free with every home freezer sold. When the customer buys an appliance, he is given a certificate on a local grocery store for the groceries and meats.

Lee Named Vice President Of Automatic Firing Corp.

ST. LOUIS—Hugo Wurdack, president of the Automatic Firing Corp., recently announced the election of James J. Lee as vice president of the company.

Lee has served as sales manager since 1945, following his return from the U. S. Navy. Prior to his entrance in the service he had been associated with the St. Louis Board of Education and the Firestone Rubber Co.

Automatic Firing recently acquired the Gemco air conditioning division of the General Engineering & Mfg. Co. and will continue to market a complete line of Gemco air conditioners.

Air Conditioning Utilities, Inc. Opens Gas, Oil Heated Building

OMAHA, Neb.—Air Conditioning Utilities, Inc., recently held the formal opening of its new quarters at 2450 St. Mary's Ave., and the new building claims the distinction of being the only one in Omaha heated by both oil and gas from three separate heating systems.

The firm, which distributes, sells, and installs heating and air conditioning equipment, has installed the three heating plants to demonstrate the equipment as well as to heat the building.

The remodeled building has enabled Air Conditioning Utilities to group all of its activities conveniently under one roof. The company distributes in eastern Nebraska and western Iowa.

Furniture Store Saves 80% of Cost by Farming Out Major Appliance Repair Work

SAN ANTONIO, Tex.—"Farming out" of major appliance repair to a carefully selected service firm has resulted in a saving of 80% in over-all maintenance repair costs, according to Stowers Furniture Co. here.

Before selecting the firm which cooperates with the dealership, M. B. Betts, appliance sales manager, made a thorough check of all such organizations in the city, tracing back the history of each over the years, getting opinions of local utility experts, distributors, and manufacturers before setting up arrangements.

"We felt it was necessary to utilize a service firm of equally high standards with the sales organization," Betts explained. "Thus, it was not until we had satisfied ourselves that we were dealing with the best possible repair agency that we set up the contract."

Under the plan, one full-time mechanic is maintained by the store. However, he is limited to "first echelon" or minor repairs or adjustments.

The service firm handles all of the repair work and calls for and delivers the appliance, but keeps the name of Stowers uppermost during the transaction. This is vastly important, according to Betts, to make sure that the store is not setting up competition for itself.

Reconditioning costs, including many callbacks, and "free service jobs," which are necessary to main-

tain goodwill, total only around \$1,000 a year, Betts said. He contrasts this with the \$5,000 or more he believes it would cost to maintain similar facilities in the appliance store—including the cost of machinery, extra haulage expenses, maintaining an inventory of parts, paying mechanics' salaries, etc.

"The fact that we are getting our reconditioning work done for about one fifth of what it would cost us to operate our own shop is incontestable, because we have thoroughly investigated every angle of carrying the work out ourselves before adopting the above plan," Betts declared.

The service firm gives an all-inclusive guarantee to Stowers on each repair job, and in addition goes still farther by constantly furnishing the furniture company with a list of new-appliance prospects. It does no selling on its own.

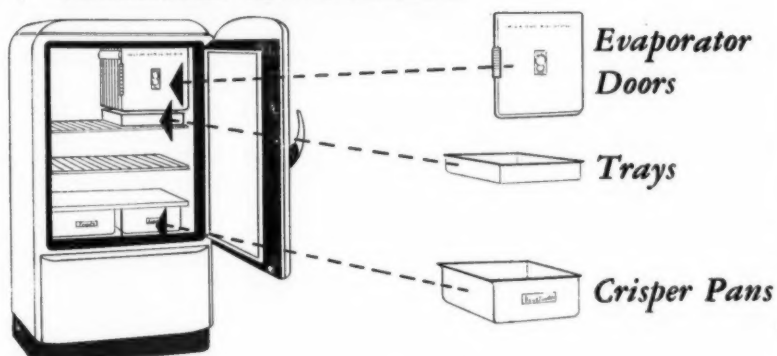
"If, for example, a mechanic is called to repair a refrigerator which is obviously not worth the cost, he turns in the name of the customer to us, and we follow it up on the outside," Betts said. "A surprisingly large percentage of leads obtained in this way prove worthwhile."

Raleigh Bank Air Conditioned

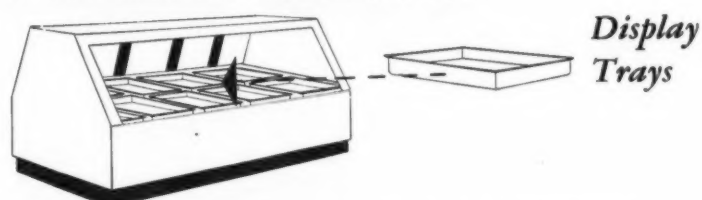
RALEIGH, N. C.—Carrier year-round air conditioning was recently installed in the new West Side branch of the First Citizens Bank & Trust Co. here by Stahl Rider, local Carrier dealer.

FOR Your PORCELAIN ENAMEL JOBS—A Specialist IS THE ANSWER

✓ HOUSEHOLD REFRIGERATORS



✓ COMMERCIAL REFRIGERATORS



✓ HOME AND FARM FREEZER ACCESSORIES

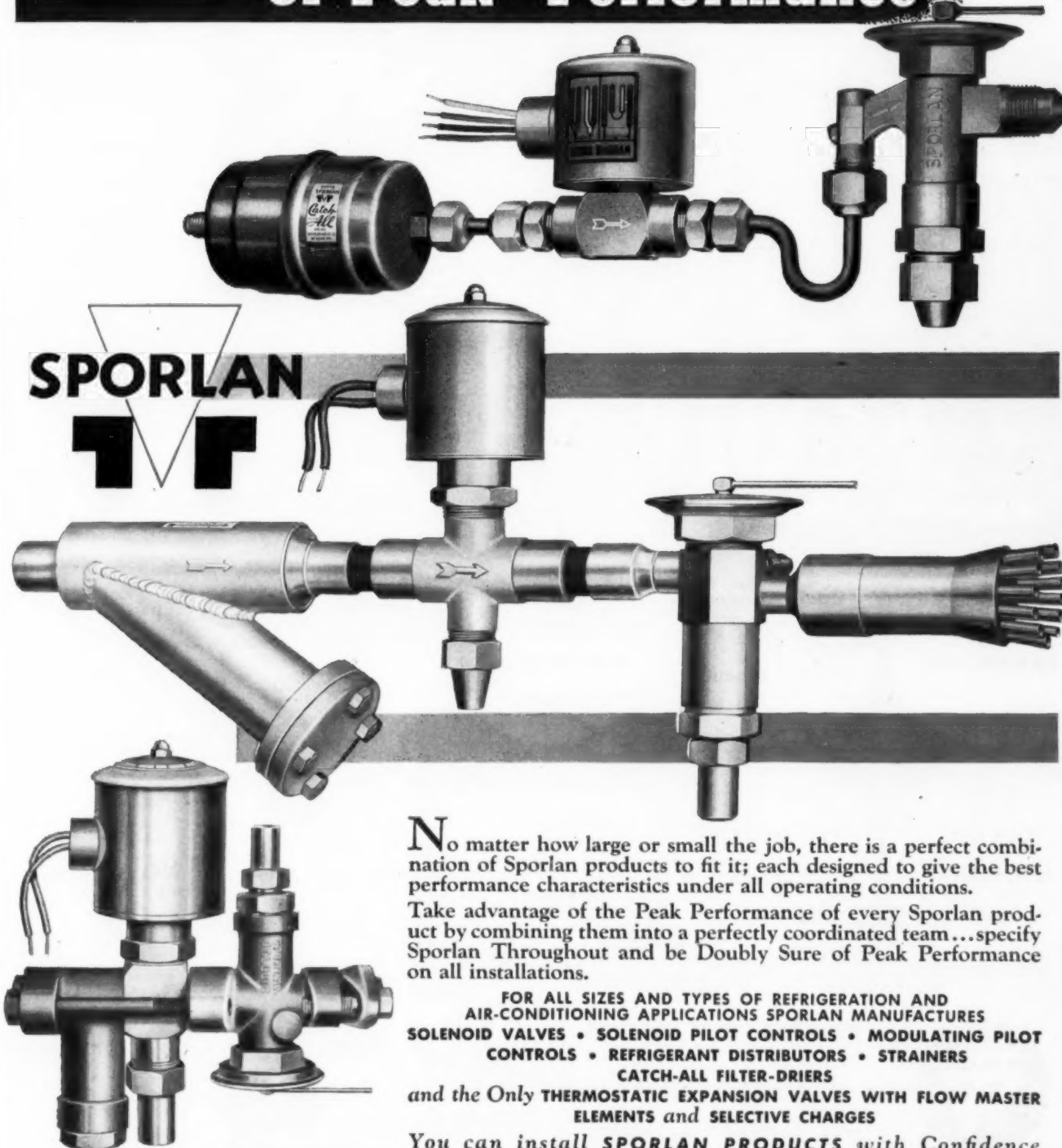
For over 20 years, The Strong Manufacturing Company has produced only top-quality porcelain enamel products—and are specialists in refrigerator accessories made to manufacturers' most exacting specifications.

You can depend on fast, efficient service, on-time deliveries, and quality geared to your production demands.

Send Us Your Specifications and Production Needs
or
Write for Complete Information

THE STRONG MANUFACTURING CO.
SEBRING, OHIO

use SPORLAN throughout for all Refrigeration and Air-Conditioning Installations and be Doubly Sure of Peak Performance



No matter how large or small the job, there is a perfect combination of Sporlan products to fit it; each designed to give the best performance characteristics under all operating conditions. Take advantage of the Peak Performance of every Sporlan product by combining them into a perfectly coordinated team...specify Sporlan Throughout and be Doubly Sure of Peak Performance on all installations.

FOR ALL SIZES AND TYPES OF REFRIGERATION AND AIR-CONDITIONING APPLICATIONS SPORLAN MANUFACTURES SOLENOID VALVES • SOLENOID PILOT CONTROLS • MODULATING PILOT CONTROLS • REFRIGERANT DISTRIBUTORS • STRAINERS CATCH-ALL FILTER-DRIERS AND THE ONLY THERMOSTATIC EXPANSION VALVES WITH FLOW MASTER ELEMENTS and SELECTIVE CHARGES

You can install SPORLAN PRODUCTS with Confidence

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI

The Drake Story

How One Small-Town Refrigeration Man Overcame Crippling Odds To Succeed with Service-Contracting Business

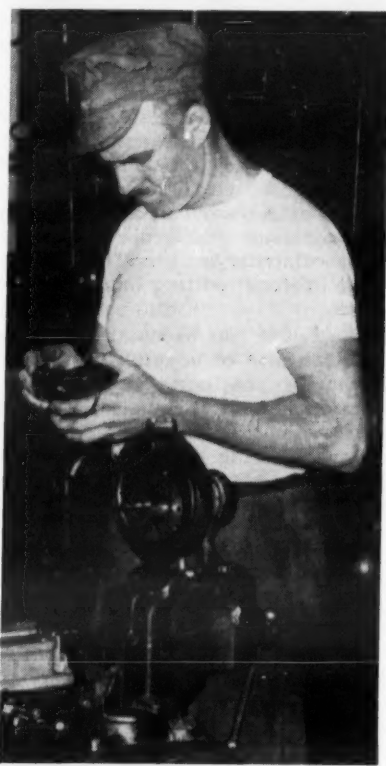
By Harry Drake, Drake Electrical Service, Marshall, Ill.

My life has been quite uneventful. I was born on a farm. Moving to town where my dad started doing telephone line work, I found his tools lying around, and that created an interest in the use of them very early in my quest for an avenue of self-expression.

Since I was only in the sixth grade, my interest in the climbing tools was more a matter of amusement than of economics. However, my interests in economics were stimulated when I was informed that if I wanted a new suit in which to graduate from the grades, I was going to have to supply the necessary cash for the purchase.

Luckily this information came during the summer before the graduating year, and I got a job in a battery service station, where I was trained in the business of assembling new automotive batteries. At that time they all came knocked down, and had to be assembled, discharged, then charged up before they were installed in new cars; also at that time when a battery went bad, it was rebuilt instead of replaced and that, too, was my job.

It was in this connection, while I was in my freshman year in high school, that I was tearing down a battery, which had had a charge of concentrated sulphuric acid poured



Although blind, Harry Drake doesn't hesitate to tear down and repair a compressor.

into it (to bring the specific gravity reading up to a point where full charge would be indicated by an hydrometer) that I met with the ingredients for my present optical condition.

Using a flame to melt the sealing compound around the jar caps to facilitate removal of the element, a small hole in the jar top permitted the flame to ignite the gas which formed as a result of the heat within the cell, and an explosion resulted, and the acid got me in the face.

Resumed Job After Accident

I neutralized the surface of my face with baking soda, but it didn't have much effect on what got in the eyes. I rode my bicycle four blocks home, through what seemed to be a fast-settling fog that had almost everything blanked out by the time I got there. It was a week before the doctoring began to show results, then by the second week I went back to rebuild the battery that got me. I thought everything was going to be all right, but the passing of a few years led me to the realization that vision was slipping.

I wanted an electrical engineering degree, and I took a job in a garage nights to pay my way through high school and still save enough on the

Editor's Note: There is probably no man in the refrigeration or any other business who has not sometime in his career been stricken by grave doubts as to whether the eternal struggle for existence is really worth all the trouble.

For those who perchance are wondering about this right now and for all who, in totaling up the year's profits and losses, question whether life has given them a square deal, we heartily recommend a thorough reading of the inspiring article below.

It's the story of a refrigeration man who entered the business in a small town the hard way because he wanted to find out why the electric motors he was rebuilding kept burning out on refrigerators. In itself the story is mighty interesting. It just so happens that the serviceman-contractor who himself typed this, his own story, is blind.

Editors of the News pride themselves that—collectively, at least—they are widely read. All of us agree that this is one of the richest, most heart-warming human document we have ever encountered.

side to pay tuition at Rose Polytechnic Institute, where I had decided to go. But that wasn't to be.

In fact, I didn't even get to finish high school before the combination of night work, four or five hours sleep, and a day in school beat me to the punch. This left me with a feeling of inferiority, and the idea that my friendship would be shunned by my fellow creatures because they could foresee responsibility for a share in my keep.

Because of this feeling I decided that around here was the wrong place to try to get a job or to try to get anywhere, so I took up line work for American Telephone & Telegraph Co. and stayed with it for three or four years. Then they put in insurance examinations, which ruled me out of that, so I went to Texas where I got into oilfield telephone and power transmission work. A few guys got burned up in that work, mostly as a result of their own carelessness, and the insurance company put the examination on the hot stick gang, and I was out again.

Kept Ahead of Insurance Company Physical Exams

I hated that, too, because there was a fascination connected to the danger which came with handling high voltage, as well as the good money which I could get for high climbing and dealing with hot stuff. Anyhow, I was getting a little laid up, so I took off for the mountains where the insurance companies didn't have hold of the situation yet, and as they got in I got out until I wound up in Mexico.

Then the depression hit in '29 and I didn't have anything to do. So I came back home with enough money to hold up a little front, but still not enough pride to keep me out of anything that there seemed to be cash in. I worked on automobiles, dug ditches, contracted pole line construction, house wiring, and electrical service work, and finally when things got so bad that even the physically fit had tough going, my going became practically impossible.

I took the few bucks I had left and bought a metal turning lathe, and a drill press, some burned-out motors and generators, and proceeded to rebuild them.

It was a tough job, but I knew that the easy jobs would be grabbed off by almost anyone, and I had figured out that the most money was to be had in the jobs which other people either didn't know how to do or else they were so undesirable that they just plain didn't want to do them.

Took Only 'Undesirable' Rebuilding Work

Well, I wasn't too proud to do the undesirable jobs, but I thought I would command more respect from a skeptical community if I could do

the jobs which the others didn't know how to do.

This was in the early '30's when my vision had gotten so poor that I could no longer see to read, or drive a car, or depend upon sight for much of anything except the general layout of the landscape sufficiently to guide me in my walking from one place to the other. This brought up the problem of getting the right wires in the right places in the commutator bars of an armature, and the soldering job done without soldering two commutator bars together, instead of getting the wire soldered in the slot.

I overcame this by using a battery and receiver and putting the wires into and soldering them in the slots, leaving an open commutator bar that made a noise in a receiver when the soldering iron touched it while in series with the battery, iron, and receiver. It was slow, but I had lots of time.

I also devised an insulated surface indicator which I used on the tool post of the lathe for perfectly centering work for turning purposes. I could free the chuck spindle on the lathe and tighten the jaws to approximately center, then move the carriage toward the work until the indicator spring touched the work at the farthest out of center spot, this caused a "pop" in the receiver as it touched. If it popped, I'd readjust the chuck, and try again. I could center a piece of work to half a thousandth in a good four-jaw chuck on a tight spindle.

Offered 'Loaner' Motors Free During Repair

Getting back to the motor work, I started advertising service motors to be used free on any job while I repaired the damaged motor. This gave me lots of time in which to repair the damage, because the patron wasn't out of service, but this brought me difficulty. I was getting a lot of my motors burned out on refrigerator jobs.

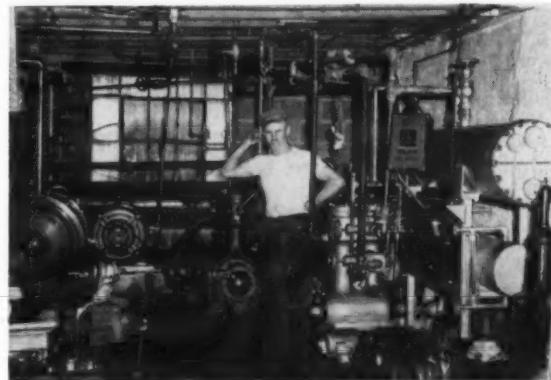
Then I realized that something must be wrong with the refrigerator that had caused the first motor to burn out, and that if I didn't find out what caused that I was going to be in constant residence behind the old eight ball.

I knew that I couldn't expect indulgence in my experimentation by a customer, so I bought a refrigerator that I could make go, and fixed it up. Then when I got another of these joahners, I traded for it. I then tinkered for about a week without any results, then started asking questions. I finally got in connection with Hutchison Refrigeration Service, and started my wheeling.

Hutch was a darned good egg, and he tolerated me any time I showed up in his backyard. And on several occasions he pulled my

(Concluded on next page)

Machinery Room He Installed Himself



Harry Drake is rightfully proud of the machinery room he installed himself to power the locker plant, which he likewise had built on a shoestring and faith.

WOLVERINE REFRIGERATION TUBE

Mill Depot Stocks at Detroit, Michigan; Decatur, Alabama; Houston, Texas; Long Island, N. Y.; Los Angeles, Calif.

There IS a Difference in TUBING

New package makes tube EASY TO STOCK AND INVENTORY; EASY TO HANDLE AND SELL; EASY TO IDENTIFY AND RESHIP

DRY CLEAN UNIFORM SOFT

Every coil individually cartoned for wholesalers

SEAMLESS NON-FERROUS TUBING

2 PLANTS DETROIT, MICH. DECATUR, ALA.

COPPER REFRIGERATION TUBING

Over 30 years of manufacturing seamless non-ferrous tubing exclusively

Sales Offices in Principal Cities

Backed by "The country's oldest producer of copper" Calumet & Hecla Consolidated Copper Co.

Specify WOLVERINE TUBING

Constant inspection every step of the way

EASY TO FABRICATE

Quality control from ore to finished product

SEAMLESS NON-FERROUS TUBING

Five Conveniently Located Mill Depots

There IS a Difference in TUBING

DRY CLEAN UNIFORM SOFT

QUALITY COILS

Literature on Request

2 PLANTS DETROIT, MICH. DECATUR, ALA.

SPECIFY WOLVERINE

WOLVERINE TUBE DIVISION
 CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
 INCORPORATED
 MANUFACTURERS OF SEAMLESS NON-FERROUS TUBING

1413 CENTRAL AVENUE • DETROIT 9, MICHIGAN

Locker Plant Constructed from Scrap Steel



Drake's Frozen Food Lockers is an attractive, modern structure offering complete locker plant services in the small Illinois town of Marshall. Drake used steel from windmills and old bridges in its construction. This photo, and the others, incidentally, were taken by H. G. Nash, one of Drake's neighbors.

Though Blind, Drake Gambled Future on Expanding Firm Into Locker Plant Field

(Concluded from preceding page)

burned up chestnuts out of the forge. Since I hadn't any wholesale connections, he supplied me with parts, along with instructions for installation, and do's and don't's, then filled my only 3-lb. cylinder with sulphur, and bid me good luck, which he knew darned well I wasn't going to have.

I tinkered, cussed, stayed awake nights, and breathed enough sulphur to kill all the birds on the Canary Islands; coughed and slobbered, and tried again, and finally after rusting all the bright work on all my tools with the stuff, I began to get frost on one once in a while.

Then to get business. I started to guarantee all overhaul jobs for one year. The scabs on my neck weren't hardly all off yet when I started getting it chopped again, but I made them good, and started cutting my guarantee to 90 days. And then things started getting better.

Then one day Hutch didn't have what I needed, so he sent me to Chuck Crane, and he also got a shoulder under my wheel. Finally he introduced me to the Russ Duncan wholesale house in Indianapolis, and recommended me for an account. This was during the war, and nobody wanted any new accounts, but they took me on anyhow, and now I was a hot shot with wholesale connections.

War Gave Repair Work Spurt

Business got darned good because I didn't have any competition in either the electrical motor field, or the refrigeration. Then came the time factor. I couldn't get all done in a day that was coming in, so I hired a man and got a truck that enabled me to discard the old gauges with the filed rims and the glass removed that I used to read by touch, and instead of walking and carrying my tools now, the big shot rides.

I bought the brick from an old clay plant and tore down my old shed and replaced it with a brick building 35 by 45 ft. with an upstairs for prospective living quarters, as I was giving the aspect of matrimony a bit of pretty serious consideration. I think the inclusion of this part of the place was a wee bit suggestive of its meaning to the proposed prospective inmate, since we had been going together for around a dozen years.

So then on one of my buying trips to Russ Duncan's menage, Margurite was on her vacation and she volunteered as chauffeur. While we were there we gave Eddie Hunter around \$350 worth of business, then a few more to a jeweler, then wound up at a Justice of the Peace office to get the job done the first thing after his lunch.

On the way home Margurite walked into the office of her boss in Terre Haute, stuck her chin out in the direction of the old boy and said, "I quit." Naturally he questioned her judgment, and confidentially, I did too, but that ended that.

Canvass Brings In \$1,500

We came on home and started making preparations to get the proposed living quarters finished up. She took hold of a bunch of notes on which I had scribbled names and amounts and she got a bunch of bills printed and started a house to house canvass of my accounts. In a very few days I was surprised to find her with about 1,500 bucks worth

of collected cash in her mitts and a set of orderly books started. Things began to take form.

The man I had, decided to take a better job, and the little woman took on the job of chauffeur and gauge reader.

A couple of years slid by, then one night we were called out to the local locker plant on a case of trouble and in the course of conversation the man mentioned having a waiting list of 300. So on the way home we had a brief talk about what could be done about that, and the conclusion was that we had ought to build a locker plant.

I figured building and refrigeration as closely as possible and arrived at the figure of \$35,000 as a reasonable estimate for what we wanted. And when we looked at the feeble pile in the bank—between a thousand and eleven hundred—we figured that it would take a heck of a lot of guts to compensate for 34,000 bucks.

But upon further inventory of intestines we figured maybe we had 'em. At any rate, at least we would never know whether or not we had unless we tried 'em out.

A new REA project had started and I had a couple of men whom I had fairly well trained working for me in the farm wiring capacity, so we took some time off and started putting an extra 15 ft. of building on the side of the old place to use for the things we were going to have to move out of the place where we had decided the locker room was going to be.

We moved into that, then started putting an extra 30 by 40-ft. addition on the front for more locker room, age and chill room, processing, and lobby. We got this all up between work spurts to raise cash every time we ran out. Then we started knocking the concrete floor out of the old machine shop part, and dug down 2 ft. to make room for 10 in. of coarse washed gravel to serve as an insulator against dampness under the sub-floor for insulation.

Insulation Comes—No Money

We had ordered close to \$4,000 worth of insulation which came about four months before we were ready for it, and it came sight draft, then we went to the bank for a loan and got a great big NO. Then came the realty loan offices and the best we could do was 3,000 bucks on the place. We took it and sold some machinery and paid for the insulation.

We were in the act of spreading the last of the gravel in the proposed insulated floor, and were going to go back out for more outside work to raise the cash for some more material and wages when Harvey Schultz from National Refrigerators of St. Louis came strolling up to innocently ask what we were building here, and commented that if it was a locker plant that we had a pretty good start and did we have any of our refrigeration bought yet?

I thought that when I told him that "when this rock is down, we are down to rock," he would go on about his business, but he seemed to get all the more interested. And when I informed him that the banks here considered my idea a very risky investment, he deliberately went to the bank, and placed the National Refrigeration Co. between me and the bank as collateral for 1,500 bucks, and construction went on.

I had never done any work on

ammonia refrigeration, but I had decided that that was what it should be and they had it, so that was what we ordered, and as it came we put it in place and finally after 14 months we had her ready to roll and the only skilled help we had was a man who had some insulating experience who stayed with us four days to get us going.

We encountered some other difficulties, such as the procurement of seasoned lumber. We bought part of an old elevator in a town 16 miles away. Then we had to build the saw to cut it into the proper sizes. And to get steel we bought such things as old bridges, windmill towers, narrow gauge railroad steel out of a stone quarry, and on one occasion a steel fabricated beam out of a building which weighed 3 tons. We got it for taking it out, but it was worth it.

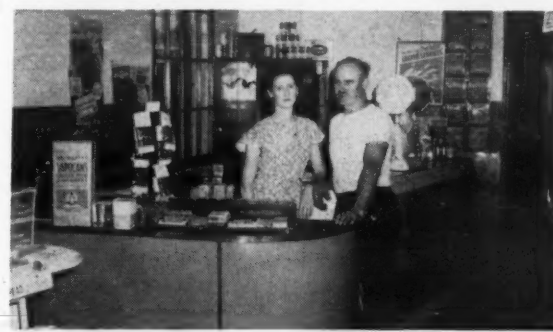
In short, this story of the material and its overhaul to make it fit the job could run into several pages in itself.

We built our own power saw and tar kettle and insulated the joint. We put in all the coils, tracking, track scales, automatic controls, expansion valve, and hand expansion valve assemblies, compressors, diesel engine, boiler, stoker, steam jacketed lard kettle, automatic heating coils for constant temperature in the smoke house, designed and built a muffler for the engine that heats all the water for the place with engine exhaust, and then we fired her all up.

First Frost Proves Thrill

I thought it felt awfully good when I felt the frost form on the first refrigerator I had fixed, but you can imagine the feeling when my hot

Wife Serves as Chauffeur, Business Manager



Housewife, chauffeur, business manager, and bookkeeper are among the roles that Mrs. Drake finds herself playing to assist her blind husband. Note also here the attractive counter and display section of the locker plant.

mitt stuck fast to the bottom coil in the sharp freeze room for the first time, and the air around my ankles began to stiffen up in that temperature.

We started with 300 lockers, and before the year was up we needed another 300, so we hit the old friend Harvey Schultz again. He came through with a personal loan of enough cash to put us on our pins, and keep us there until the business got under its own steam.

Now Margurite keeps the books and manages the buying and selling and direction of personnel in the plant, and I have two men assisting me in the refrigeration and electrical service and contracting.

To give you an idea of an average day—today, one man went on some plumbing service calls, while I took the G.I. trainee, and we worked on three household jobs, one store frozen food display case, one restaurant reach-in, and a meat case, and tomorrow, already we have two house-

hold jobs and a stoker, and the hooking up of the controls on a 100-hp. pump so the automatic, compensating switch can be operated from the control point in town three miles away.

We installed the compensator and hooked up the pump a week ago, and tried them out. Now comes the change-over from the old 60-hp. pump as the regular pump, and now it will become the stand-by.

'Darned Hard To Estimate'

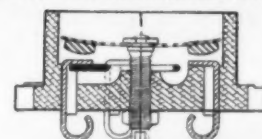
Since October of last year we have wired over a hundred farms and installed and connected over 300 hp. of industrial machinery and control equipment, and since a lot of the refrigeration work is done on holidays and Sundays, and before and after other work as well as being on it a lot between jobs of other nature, it would be darned hard to estimate even fairly accurately how much of it we do in a year.

They'll All
KEEP COOL
When Hermetic Units
Are Protected



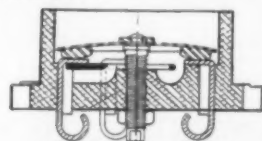
With **KLIXON**
Dome-Mounted **PROTECTORS**

HOW KLIXON PROTECTORS WORK!



CLICK . . . IT'S OFF!

Should a motor become overheated and dangerously hot, the Klixon Protector snaps the power "off" preventing the motor from burning out.



CLICK . . . IT'S ON!

When the motor cools to safety, the Klixon Protector snaps the power "on" automatically.

Household refrigerators, beverage coolers, deep freeze units, frozen food cabinets, refrigerated meat cases, ice cream cabinets . . . they all will keep cool when the hermetic unit is protected with a Klixon dome-mounted Protector.

The reason . . . Klixon Protectors prevent motors from overheating and burning out . . . enable the hermetic unit to maintain refrigeration and thus avoid possible costly food spoilage. And because the Klixon Protector is built-in as an inherent part of the unit by the hermetic manufacturer, you get a tested and proven combination that assures full protection for the complete life of the hermetic unit.

Manufacturers of hermetic units can guarantee their units against motor burnouts by installing Klixon dome-mounted Protectors on their units. Cabinet manufacturers, who buy hermetics for use in their products, can also be assured of trouble-free motor operation by insisting on hermetics that are protected with Klixon Protectors. They'll prevent motor burnouts, cut repairs and replacements.



KLIXON MOTOR STARTING RELAYS

Their positive action and long life eliminate starting troubles. They complete the combination with Klixon Protectors required to start and protect hermetic motors. Used and recommended by leading refrigeration manufacturers.

SPENCER THERMOSTAT Division of Metals & Controls Corporation

KLIXON

2412 Forest St., Attleboro, Mass.

Free Frozen Rolls Make Freezer Prospects Out Of Cafe Patrons

PORTLAND, Ore. — Converting patrons of its restaurants into home-freezer prospects was the purpose of a promotion carried out during September and October by Lipman & Wolfe, department store here, which carries a complete line of home freezers in the appliance department. During the two months, every menu of a tearoom and restaurant operated by the store offered a popular dinner roll. Included on the menu was an invitation to visit the appliance department, and to receive there a free package of a dozen rolls, quick-frozen and ready to heat for the family dinner table merely by placing them in an oven.

A battery of General Electric home freezers in the appliance department was kept full of the fresh-frozen rolls, with salesmen stationed near each, to greet prospects attracted by the offer.

That the idea developed many worth-while prospects can be seen from the fact that more than 500-dozen rolls a day were distributed through the appliance department.

"The principal value of the promotion was that it gave us a chance to contact many customers who had never before undergone a home freezer demonstration," it was pointed out. "Naturally, many 'free riders' were included in the visitors who accepted a dozen rolls. Under the law of averages, however, we anticipate several scores of home freezer sales."

TIME-PAY BONUS:

BOSTON — Rewarding customers with valuable coupons, good for discount on later purchases, in return for keeping their time-payment accounts paid up to the letter, is a policy which has been responsible for many repeat appliance sales at Osgood Furniture Co. here.

The Osgood store has been utilizing the "coupon clipping" idea for more than 15 years, and has found that it has been a consistent goodwill builder, a means of insuring that customers will continue to use their charge accounts after having paid up the original item, and that they will return to the store, years in the future for replacement purchases.

The bonds, entitled "Osgood Profit-sharing bonds" are sent out to time-payment customers as a complete surprise. No mention is made of them at the time the customer makes the original purchase.

However, as soon as the instalment buying plan is paid out, with all payments made at the regular date each month, and the entire transaction closed out at the pre-determined date of expiration, a bond goes out to the customer.

Printed to resemble a Government treasury certificate, the bond entitles "Highest Credit Rating" to the customer, with the signature of A. Neill Osgood, president of the store, at the bottom.

In a column at the right is a series of coupons, all of which entitle the customer to worth-while discounts on later purchases.

There are two coupons good for \$1 apiece, four coupons good for \$2

apiece, two worth \$5 apiece, and two worth \$10 apiece to be utilized on purchases from \$20 to \$200, respectively.

Thus, the customer who has faithfully paid out her charge account, may realize a substantial saving on the purchase of a new item, merely by presenting the coupon and the bond to which they were attached.

The bond is sent out in a plain envelope, with a letter of thanks, likewise signed by President Osgood. Copy in the letter reads:

"Your recently closed account has been brought into my office, and I wish to congratulate you on the splendid credit rating you have established with our store. Our association with you has been a most pleasant experience.

"I hope you believe that we, too, have done our part by delivering merchandise to you that will give satisfaction for many years, and that our family of employees has not failed in extending the usual Osgood courtesy and service.

"In appreciation of your excellent record, your name is being added to our preferred customer list, and we are enclosing an Osgood gold bond, which entitles you to discounts on future purchases.

"It is always a pleasure for me to meet our customers personally. The next time you are in the store, why not stop in and say hello?"

There has been a consistently high redemption factor in use of these coupons since their initial development, according to Osgood.

Some of them, in fact, have turned up as much as 5 to 10 years after being sent to the housewife—proof that appliance customers are well enough impressed with the idea to carefully put the coupons away.

Instalment Payments Cleared Up On Time Net Special Discounts

For example, a woman who had purchased a refrigerator 12 years before, and who had made several other purchases in the interim, recently applied half a dozen coupons to the purchase of a new box—all of which Osgood's cheerfully honored.

Similarly, the plan has been utilized to attract "repeat sales" to customers before they have paid out their entire account.

Another letter form is used in this promotion, thanking the customer for her business, pointing out that she may keep the account alive by adding on any new purchase she wishes.

'Family Shopping Hours' Proves Key To Rising Sales for Dealer

ATLANTA—Utilizing radio advertising to appeal to the "family customer" and remaining open until 9 o'clock on Friday night is a move that is showing excellent dividends for Rowley Appliance Co., new General Electric dealership here.

K. C. Rowley, head of the store, believes that appliance dealers of today must give customers maximum convenience in order to maintain volume.

Therefore, he sponsors a Friday night radio program which gives customers interesting information on new appliance developments, accents the fact that the store is open on Friday evenings, and invites Atlanta housewives to call for demonstrations. During the hours from 7 to 9, the store is always thronged with prospects, according to the dealer.

"Along with such basic essentials as a good service department, nationally-advertised lines, energetic outside selling, etc., the appliance dealer today must provide parking for customers, give them the benefit of shopping hours when husband and wife can both be in the store, or lose out," Rowley said.

"We currently have three outside salesmen on the street cold-canvasing. In each case, we do not intrude ourselves forcefully on the housewife, but merely explain that we are open on Friday evenings, and extend a cordial invitation to come around."

J. K. Loudon Gets Gilbreth Award

YORK, Pa.—James Keith Loudon, vice president and assistant to the president of York Corp. here, has been presented with the Gilbreth Award for his contributions to the advancement of scientific management by the Society of Advancement of Management.

Loudon was national president of the Society for Advancement of Management in 1941-42, and as a past president, holds an honorary life membership in the society. He is a native of Columbus, Ohio, and a graduate of Ohio State university. Before joining York Corp. in 1948, he was associated with Armstrong Cork Co. in Lancaster, Pa.



The wide acceptance of Standard's Counter-flow Condensers proves their dependable quality. Sizes from 1/2 to 15 h.p. Used by refrigeration men for more than a quarter century.

Write for Bulletin C-3.

STANDARD REFRIGERATION CO.
332 S. Hoyne Ave., Chicago 12, Ill.

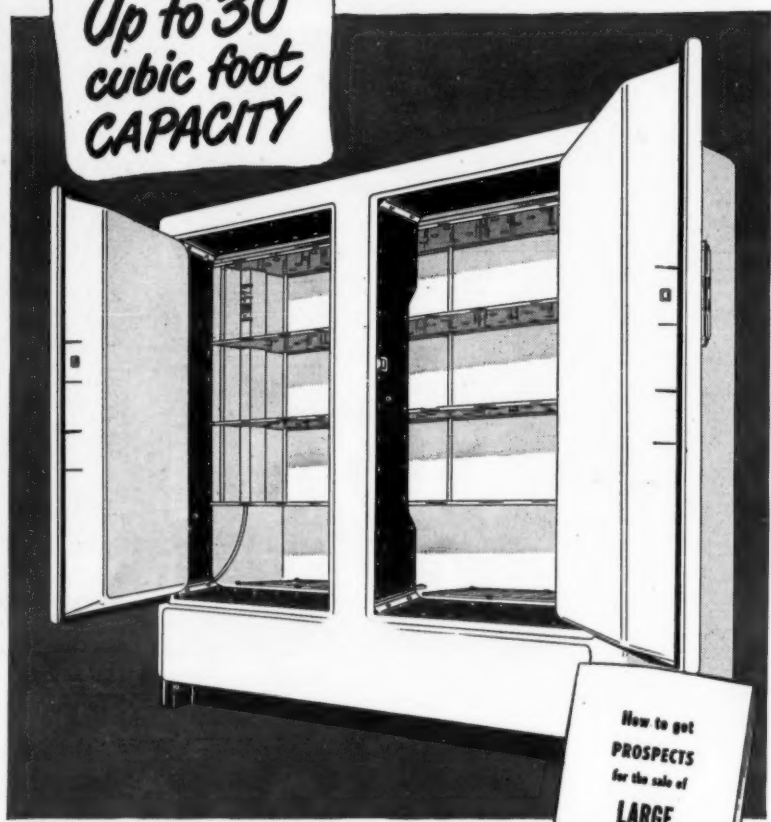


STAINLESS STEEL EVAPORATORS
LIQUID REFRIGERANTS
COUNTERFLOW CONDENSERS
SHELL AND COIL CONDENSERS

PHILCO FREEZERS

For Farms and Institutions

Up to 30 cubic foot CAPACITY



PHILCO DV-301 (above) 30.1 cu. ft. 2 door Upright Freezer holds up to 1050 lbs. ... provides huge capacity for quantity users of frozen foods. Full-width Refrigerated Shelves. Temperature Control. Net wt. 840 lbs. PHILCO DV-151 (below) 15.1 cu. ft. size with 525 lb. capacity. Net wt. 515 lbs.

How to get PROSPECTS for the sale of LARGE PHILCO FREEZERS

Here they are ... the new giant capacity Philco Freezers of 30 and 15 cubic feet ... designed for customers requiring big volume storage of frozen foods. Here too, is a proven selling plan to help you get your share of this BIG FREEZER business in your area. You can start at once lining up freezer prospects and making sales. Get the full story now from your Philco Distributor.

PHILCO

Famous for Quality the World Over

Survey To Check Market For Frozen Bakery Items

CHICAGO—To determine the rate of growth and potential size of the market for frozen foods, the baker's rightful share of that market, and how it may be secured by him is the object of a survey recently launched by Lloyd R. Wolfe and Associates, business consultants here.

The firm announced that its survey will also endeavor to establish fundamental facts concerning the manufacture, packaging, and distribution of frozen bakery products. It will seek answers to these questions:

Will popular acclaim of the multitude of frozen foods and attendant economies in packaging and distribution provide potential volume and profit for the baker?

Have failures in frozen bakery products been due to lack of quality, problems of packaging, careless transportation, faulty storage, or inadequate display?

New York City Apartment Building Will Install 547 Dishwashers

NEW YORK CITY—Hotpoint automatic electric dishwashers for 547 apartments will be installed in a New York building which has been characterized as the "Radio City" of apartment houses.

Rising 20 floors above the street and occupying an entire block, the building, Manhattan House, is being built and will be managed by New York Life Insurance Co., the owner. While the total cost was not announced, the contract for construction is for an amount in excess of \$10 million.

The builders are placing special emphasis upon kitchen equipment which will obviate the need for staffs of servants. Kitchen odors will be eliminated from public halls by pressure ventilation systems which force fresh air into apartments, rather than the previously used exhaust system.

In addition to the dishwashers, each apartment will be supplied with an electric refrigerator, gas range, ventilating fan, and a full complement of wall and base cabinets. Units run in size from two rooms to seven.

The building is bounded by Sixty-fifth and Sixty-sixth Sts. and Second and Third avenues. It will have six doctors' suites in addition to retail shops and a restaurant on a lower floor.

Hall In E. W. Edwards Post

BUFFALO—John W. Hall has been appointed sales manager of appliances at the Buffalo store of E. W. Edwards & Son. He will serve as assistant to Norman Kirchner who has been named appliance buyer for the three stores of E. W. Edwards & Son.

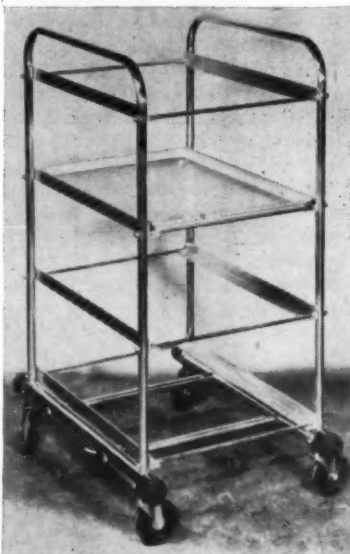
Jenkins-Leach Holds Opening

MEMPHIS, Tenn.—Jenkins-Leach, Inc., 216 S. Cleveland St., in the new Bomah Shopping Center is holding its grand opening currently till Dec. 23. J. A. Leach and William R. Jenkins are owners.

DEALERS WANTED



Aluminum carryout cart. 8" semi-pneumatic tires. Ball bearing wheels.



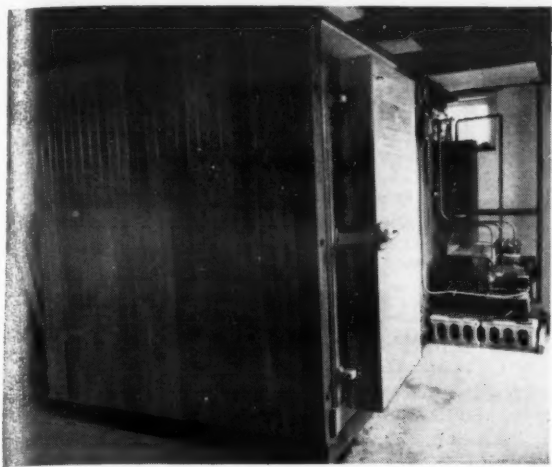
All aluminum self-service meat and cheese carts for self-service counters.

CHESLEY INDUSTRIES

7731 LYNDON

DETROIT 21, MICH.

Doing a Splendid Job



Tunnel Hatcheries stores up to 300 lbs. of dressed turkeys in this freezer which holds temperature at 0° to 10° at all times.

Warm Air Group Meetings To Cover Heating Trends

CLEVELAND — The National Warm Air Heating and Air Conditioning Association announced recently that 20 brand-new Indoor Comfort Conferences have been scheduled for the early part of 1950.

Designed to meet the requests of previous conference students, the 1950 schools will feature instruction covering the recent trend for low-cost house heating with warm air larger non-residential structures.

Of two-day duration instead of three, these conferences will be of a special nature so that those who attend can immediately increase their business activities to include these newer applications.

Guy A. Voorhees, application engineering director of the Association, will continue to instruct the new conferences, and is currently preparing the material to be presented.

Louisville Hotel Plans To Air Condition 234 Rooms for Derby

LOUISVILLE, Ky.—Air conditioning of 234 of the 400 rooms in the Kentucky hotel here will be finished in time for the Kentucky Derby next year, J. Graham Brown, new owner of the hotel announced recently.

Brown, who purchased the hotel for a reported \$2,000,000, said it is being modernized at a cost of \$350,000.

LOOK to LARKIN

for Low Prices



LARKIN CEILING HUMI-TEMP

Price is only one factor in the selection of any product—especially one that has so important a task as protecting valuable perishables. Performance must come first. Quality cannot be overlooked. Durability is highly important. Larkin has all of these. And Larkin has low prices, too. Compare them and see for yourself how low they really are.

For the latest Larkin price list, see your wholesaler. If you wish, write direct to us and we shall be glad to send you one.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY
LARKIN COILS
319 MEMORIAL DR., S.E. • ATLANTA, GA.

Hatchery Stores 300 Lbs. Of Dressed Turkeys In Custom Freezer

WOODBURNE, Pa.—A turkey freezer built for the Tunnel Hatcheries here, capable of holding over 300 pounds of dressed turkey has been doing a splendid freezing job for owner Henry Ejdys.

"We needed a freezer primarily to hold the 300 pounds of turkeys that we dressed every 24 hours in good condition until they were loaded for shipping to market," said Ejdys. "So we decided to build our own freezer in the basement."

The freezer is approximately 6 by 10 by 6 ft. high. It is insulated with 6 in. of fibre glass, sheathed inside and out, with the interior varnished.

Inside are two shelves, two tiers high. The box has an inside light with a pilot-type outlet switch.

Temperature is maintained at 0 to 10°, based on 7,100 B.t.u. per hour. Equipment includes a Kramer Thermobank TV 102 and a Frigidaire 1½-hp. water-cooled compressor.

O'Keefe, Warehouse Assn. Official, Dies

WASHINGTON, D. C.—William M. O'Keefe, for 21 years executive secretary of the National Association of Refrigerated Warehouses, passed away Wednesday, Dec. 7, after a month-long illness. He was 59 years old.

He was educated in Chicago parochial schools and Watson's Business College in that city. He began his business career with the traffic departments of the Erie and Illinois Central Railroads.

Following employment by the Western Trunk Line committee, he became executive secretary of the National Poultry Butter and Egg Association and later vice president and general manager of the Live Poultry and Dairy Traffic Association.

June, 1928, marked the start of his services as executive secretary of NARW—then known as the cold storage division of AWA.

Pozner Electric Gets Carrier N. Y. Franchise

NEW YORK CITY—Albert I. Pozner, president of the Pozner Electric Co., here has announced that his firm has been awarded a sales and service franchise from Carrier Corp.

The Pozner Electric Co., a member of the Real Estate Board of The Bronx, is located at 180 E. 163rd St., The Bronx. Pozner said alterations are now being made at this address to accommodate the new equipment. A staff of Carrier trained air conditioning specialists will be employed by the Pozner Co. to take over this new service.

All air conditioning operations are expected to be in full swing by mid-January of next year.

Nelson Co., Parts Firm, Outlines Details of Pension Plan for Employees

ST. LOUIS—The N. O. Nelson Co., wholesaler of plumbing, heating, industrial, and refrigeration supplies, has announced the adoption of a pension plan, according to Leo J. Bachle, president.

Because the firm was founded in 1876, Bachle stated that many employees have literally "grown up" with the firm. Consequently, the pension plan provides for recognition of past years of employment on a non-contributory basis.

Future service to retirement age of 65, however, is paid by contributions of both employee and employer.

In outlining the plan, Bachle pointed out that in addition to retirement pay for life after reaching the age of 65, additional protection benefits are given to each employee in case of death or permanent disability.

Bachle stated—"It has taken a number of years to place our plan in operation but we were anxious to recognize the efforts of employees who have assisted in the growth of the N. O. Nelson Co. We want our employees to enter their retirement years without fear of insecurity. Our plan permits the company and employees to work together."

Dealer Opens In Hamilton, Ont.

HAMILTON, Ont., Can.—A.I. Walters has opened a new appliance store at 124 King St. W., Dundas, featuring a complete line.



Mr. Foose, left, checks self-service dairy section of dual-purpose case as an employee loads meat into walk-in section.

Self-Serve Market's Walk-In Also Permits Display of Dairy Products

MORRISVILLE, Pa.—A combination dairy display case and walk-in box has saved the Foose self-service market here valuable store space and a substantial sum of money.

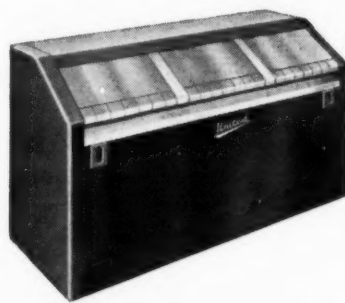
"I needed a display case for our dairy products and also a walk-in box for meat and poultry," said John S. Foose, "and I felt that a combination case would suit my purpose well. I drew up my own design and called in the Trenton Refrigeration Co. to make the box for me. It is doing a wonderful job."

The box is 6 by 9 by 8 ft. high and is powered by a Frigidaire ¾-hp. compressor. It is maintained at 38°

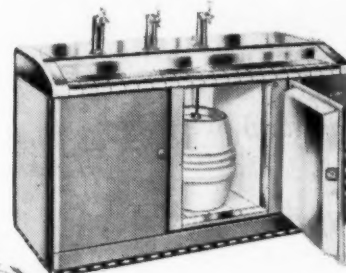
24 hours a day.

The case has a walk-in door at the side and a sliding glass door section in the front that opens onto three shelves. The shelves are about 15 in. wide and hold a large supply of milk, cheese, cream, and other dairy products. The shelves are illuminated with fluorescent lighting, which also illuminates the interior of the walk-in box.

Inside the box is a center pipe at the top onto which fowl is hooked and around the sides of the box are hooks for hanging meat sections. Wooden slats separate the dairy display shelves from the walk-in section.



"Avoid Bottle Cooling Bottlenecks"
United Dry Kool

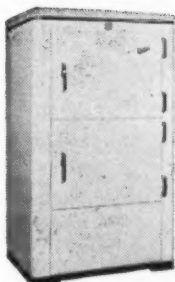


"Cool on the Draw"
United Koolmaster

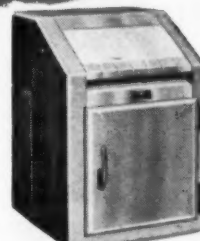
"Frozen Assets"
of Business!
the
United Line



"Display and Self Service"
United
Reach-In Refrigerator



15 cu. ft. Model UF15

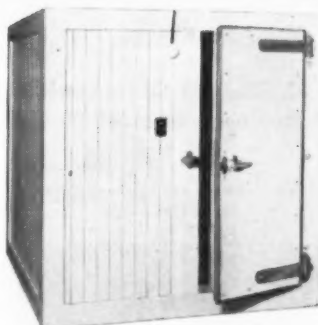


"Cut Cube Costs"
United Kubemaster

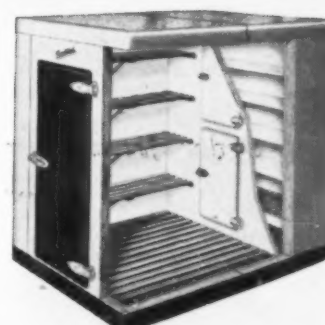
From bottles to berries, United keeps them cool or cold with a completely modern and efficient line of Coolers, Freezers, Reach-Ins and Walk-Ins. Dealers have come to admire the United name, for United stands for refrigeration equipment that is manufactured with exacting standards under constant testing by expert refrigeration craftsmen, backed by a complete program of sales promotion and dealer helps. Literature is now available on the entire new line of United Refrigeration units. Don't delay, write today for the United "profit plan" for alert dealers.

United Refrigerator Company

Hudson, Wisconsin



Economically
Mass-produced
Metal Lined
COOLER
United
Walk-In-Etto



Frozen
and Chilled
Storage
Simultaneously
United
Two-Temp
Refrigerator

NEED COLD PLATES? Call DEAN!!!

For ice cream cabinets, locker plants, soda fountains, farm milk coolers, farm freeze cabinets, low temperature test rooms, window displays, liquid coolers. Also plates for baudelot-type coolers. Custom built plates available on special order such as cylinders, U's, angles, tanks, etc. Plates available in stainless steel and other metals.

WRITE FOR CATALOG

DEAN PRODUCTS, INC.

1042 DEAN ST., BROOKLYN, N. Y.



They'll Do It Every Time By Jimmy Hatlo



Do You Have 'One Foot In the Door'?

An experienced
air conditioning
engineer with
a background in
teaching and writing

A well-arranged,
convenient, and
inexpensive series
of manuals



JUST OFF THE PRESS

. . . the first in a series of simplified, practical training manuals and reference books for layout and installation of comfort air conditioning systems.

Order your copy now!

See it at your parts wholesaler!

PRICE: \$2.00 PER COPY

(Price includes a copy of one of the best psychrometric charts available, plus a chart that simplifies the sizing of grilles.)

A lot of doors must be opened to arrive at successful air conditioning application methods. And here's a new "key" to the doors. . . James LaSalvia's "THE KEY TO AIR CONDITIONING."

As in other books of "The Refrigeration Library," the material is presented in a simplified, easy-to-understand manner, with charts, tables, problem examples, and conclusions, serving as instruction for the beginner and reference for the experienced installer.

Mr. LaSalvia has had 30 years experience in air conditioning, refrigeration, heating, and ventilating. This experience has covered designing, installing, and testing more than 1,000 air conditioning systems of all types, in addition to conducting training schools and college classes.

This first manual No. K-1 (additional manuals to be published in the near future) covers the fundamental physics of air conditioning, use of charts, methods of ventilation, figuring of air requirements, refrigeration problems as related to air conditioning, use of fans, methods of air distribution.

Order from your parts wholesaler
or use this coupon

Business News Publishing Co.
450 W. Fort St., Detroit 26, Mich.
Please send copies of "The Key to Air Conditioning"
No K-1 @ \$2.00 per copy. ☐ Remittance enclosed. ☐ Send bill.
Name
Address
City..... Zone..... State.....
12-19-49

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
registered
U. S. Patent
Office;
Est. 1926



Copyright
1949,
Business News
Publishing Co.

F. M. COCKRELL, Founder

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: \$5.00 per year; 2 years \$8.00. All other foreign countries: \$7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, Editorial Director

C. DALE MERICLE, Associate Editor

JOHN SWEET, Assistant Editor
HUGH MAHAR, Assistant Editor
GEORGE HANNING, Assistant Editor
ROY DENIAL, Assistant Editor
Editorial Assistants: MARGARET DEAN,
MARGARET POMMERENING, LOUISE
GINET, AND LORRAINE MAJOR

E. L. HENDERSON, Business Manager
ROBERT M. PRICE, Adv. Representative
ALLEN SCHILDHAMMER, Adv. Rep.
ALLEN S. RUSSELL, Adv. Rep.
BETTY JANE TULLOCH, Adv. Secy.
WALTER J. SCHULER, Production Manager
JOHN F. JOLIAT, Circulation Manager

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 58, No. 16, SERIAL No. 1,083, DECEMBER 19, 1949

We Can't Extract Blood from a Turnip

AFTER a certain point has been reached—the breaking point—the higher the tax rate, the less it yields.

This principle was stated well by the controversial British economist, Lord John Maynard Keynes, whose views have influenced the conduct of both Britain's and America's governments since the early days of the first Roosevelt administration. Keynes often was wrong, but not when he wrote:

"Nor should the argument seem strange that taxation may be so high as to defeat its object, and that, given sufficient time to gather the fruits, a reduction of taxation will run a better chance than an increase of balancing the budget.

"For to take the opposite view is to resemble a manufacturer who, running at a loss, decides to raise his price, and when his declining sales increase the loss, wrapping himself in the rectitude of plain arithmetic, decides that prudence requires him to raise the price still more, and who, when at last his account is balanced with naught on both sides, is still found righteously declaring that it would have been the act of a gambler to reduce the price when you were already taking a loss."

Douglas C. Abbott, Canada's finance minister, footnotes that observation by pointing out that Canada's post-war bold program of tax relief stimulated the national economy of that wonderful nation at a crucial time.

In this connection he refers to the number of instances in which Canada has either reduced or eliminated taxes, especially on personal income, since the presumed end of World War II.

Minister Abbott does not suggest that tax relief was the only factor involved in Canada's great prosperity.

"It is interesting, nonetheless," he intercepts, "that even when you in the United States were worried by rising unemployment figures, there was no appreciable change in the employment situation in Canada."

Tax reductions on individuals and enterprisers not only haven't put the Canadian national budget into the red, Abbott footnotes, "but every month since the beginning of this fiscal year I have been required to explain why revenues still exceed expenditures by more than had been predicted. Our latest estimates for the fiscal year as a whole indicate a surplus of about 90 million dollars."

Canadian taxes were brought down in careful stages over a period of four years. (But they were brought down, and everybody benefitted.)

When Canadians believed the time had come for a balanced budget, "we acted boldly, concentrating our tax reductions on the individual income tax in order to encourage consumer spending," Minister Abbott declares.

Personal income tax exemptions were restored to pre-war levels, "nuisance" taxes on a large number of commodities were eliminated, the tax rate was reduced on the first \$10,000 of corporate profits (to aid "the family type" of business) and double taxation on corporate profits and dividend payments was reduced in some cases and eliminated in others.

"I am confident that the taxation policies we pursued did help to keep the economy moving ahead steadily on an even keel," Minister Abbott concludes.

And no one can gainsay him.

We, too, could be more prosperous and happy if we were half so smart as our Canadian good neighbors.

Waterworks Wax Wary

Water Shortages May Make Refrigeration and Air Conditioning Targets for Restriction

CHICAGO—There is a water supply problem today in many parts of the United States, and the refrigeration and air conditioning industry is directly concerned because water is vital to operation of the equipment it produces and sells, and because the industry is—probably unfairly—an obvious target for those who may seek restrictive measures against "non-essential" uses of water.

The industry has developed and has used for many years water-conserving devices with water-cooled condensing units, and the proper selection and use of these devices become of increasing importance. However, the industry should take a keen interest in the matter of increasing the water supply in areas where shortages have become critical, and also to keep a wary eye open for legislation that may single out the refrigeration and air conditioning field for restrictive measures that may be unjust.

The above was the substance of the thinking expressed by authorities from a number of the elements involved in the water supply problem, as set forth during the Water Supply and Water Re-Use Conference held at the recent annual convention here of the American Society of Refrigerating Engineers.

Demand Outrunning Supply

What are some of the facts in the matter? The demand has run ahead of the supply in some places where the draining off of available water has not been met by an adequate recharging of the supply by nature or by man.

Most authorities agree that the U. S. probably has abundant supplies of water which can be made fit to use. However, the supplies just don't happen to always be in the right places—in or near high-use metropolitan areas.

The well-publicized shortage in metropolitan New York is a case of increasing demand pulling away from available supply, with nature complicating the problem by failing to come through with normal precipitation in the watershed to replenish the supply.

Water Table Level Drops

In other parts of the country, a different type of circumstance prevails, which in the long run may be more serious than that faced by those with the reservoir-type of supply. In northern and central Illinois, declared Frank C. Amsbary of the Illinois Water Service, the water table level has dropped to around 600 ft., at which point pumping costs are so excessive that neither public water utilities nor private industrial resources can afford new supply means.

Restrictive and legislative measures have naturally come into being. In Indiana, unless he has a special permit, a user taking more than 200 g.p.m. from the ground for refrigeration or air conditioning purposes must either circulate the water through water re-use devices such as evaporative condensers or cooling towers, or return it to the ground through re-charge wells.

Various municipalities throughout the country have made the application of water re-use devices mandatory with refrigeration and air conditioning equipment where the usage factor goes beyond a certain point.

Chicago Official Gives Estimate of Industry's Water Consumption

By 1970 there will be 262,400 tons of refrigeration and air conditioning in operation in Chicago, using a total of 1.5 gals. of water per minute per ton, predicted Oscar Hewitt, Chicago commissioner of public works, in officially welcoming the ASRE to the city for its forty-fifth annual meeting.

This figures out as 206,876,160,000 gals. of water for the year. "At present we pump 13,600,000,000 gals. for air conditioning annually; 39,312,000,000 for commercial refrigeration; and 4,336,000,000 gals. for industrial refrigeration. This total of 52,240,000,000 gals. of water a year for refrigeration costs \$4,579,000, or approximately 13% of Chicago's total water collection," Hewitt said.

"Almost the entire pumpage of one month is devoted to refrigeration."

"I'd like you engineers to figure some way so that you wouldn't use so much water."

Eight states are now reported to have ground water control laws. New Jersey allocates underground water to industries by granting or withholding drilling permits.

Another side of the picture, why the supply is lagging in certain areas even where the fundamental water resources are in abundance, was outlined by E. L. Bean of the Philadelphia Water Bureau.

Cities have not expanded their water pumping facilities because they cannot get sufficient revenue from selling the water, and find it difficult to get such work financed through any kind of a bond-issuing arrangement.

Water Utilities Lack Money

Bean contends that the water utilities have never been self-supporting, and that the breach between income and operating costs has widened appreciably in the past decade.

"Income to water utilities has increased only 11% since 1940, while costs are up 75 to 100%," Bean declared.

"If new facilities are to be built, they must be on a self-supporting basis. Water utility people are giving serious consideration to higher rates for large users, or possibly the establishment of an off-peak rate structure."

Have Committee on Air Conditioning

Isn't failure to use available conservation methods a willful waste of the common water supply, Bean asked the engineers. If some means of conservation is not worked out, it is certain that restrictive measures will be invoked wherever scarcities become critical, he declared.

The American Waterworks Association is seeking advice and assistance from all sources in looking forward to possible solutions of the water supply shortage problem, and both Bean and Amsbary asked for suggestions from the refrigeration and air conditioning industry, particularly

with respect to the association's committee on Water Use and Air Conditioning, of which Amsbary is chairman.

What Is Industry's Part?

Harry Edwards, veteran industry engineer, asked the question in effect "why single out the refrigeration and air conditioning industry for penalties, when there are many other kinds of users who use much greater quantities and who may have greater potentialities for conservation."

"Does the Waterworks Association know what percentage of the increase in the use of water is attributable to the refrigeration and air conditioning industry?" he asked.

Edwards said utilities should increase the cost of the water they supply, and that those using over 1,000 g.p.m. should pay a penalty rate.

Claims Chicago Supply Okay

W. S. Bodinus, representing the Heating, Piping & Air Conditioning Contractors Association of Chicago, stated that pumping facilities in Chicago now will be adequate to handle expected expansion for many years to come. The sewer problem (for drainage) is a problem in Chicago, and needs correction soon.

Bodinus expressed the opinion that

the 1½ and 2 gal. per minute per ton of refrigeration being used did not result in excessive or peak loads or would cause any pressure drop, and urged that no restrictive measures be set up which would hinder the sale of refrigeration or air conditioning equipment and increase the cost to consumers.

Speaking on "Cooling Tower Selection for Refrigeration and Air Conditioning," H. E. Degler of the Marley Co. pointed out that water does not "wear out." Evaporation in some processes may slightly reduce the quantity, but the same water can be purified, cooled, and re-used over and over.

What Is Effect of Re-Use?

When water is used as a coolant on a once-through basis and then thrown to waste, each pound will remove only 20 to 30 B.t.u. from the system. If the water were recirculated and re-cooled (with atmospheric air) by evaporation and convection, each pound evaporated would remove 1,000 B.t.u. or more from the process, or 50 times as much, Degler declared.

This data, he said, indicates the desirability of employing water-cooling equipment as a means for re-using the water.

Degler also made the claim that the total annual cost of owning a water-cooling tower is considerably less than the cost of city water used once for cooling and then discharged to the drain. For a 100-ton installation, the yearly cost of a tower is considerably less than half the city water cost where the rate is \$1 per 1,000 cu. ft. (13 cents per 1,000 gal.), he stated. At this rate, he pointed out, amortization of the cooling tower could be effected in less than three years from the savings in water costs

for units of 50 tons or larger capacity.

For a 5-ton system, Degler's paper showed a total yearly water-cooling tower cost of \$86.60, as contrasted to a city water cost of \$120. (This included interest and depreciation of 15% on the installed tower cost of \$400 totaling \$60; power cost for fan and pump of \$23; annual water make-up (2%) cost of \$3.60). For a 100-ton system he put the cooling tower cost at \$962 as compared with a city water cost of \$2,400. (This is based on 95-85-78° F. design conditions; 1,500-hour per year operation.)

Kremble Heads Automatic Heating Div. at G-E

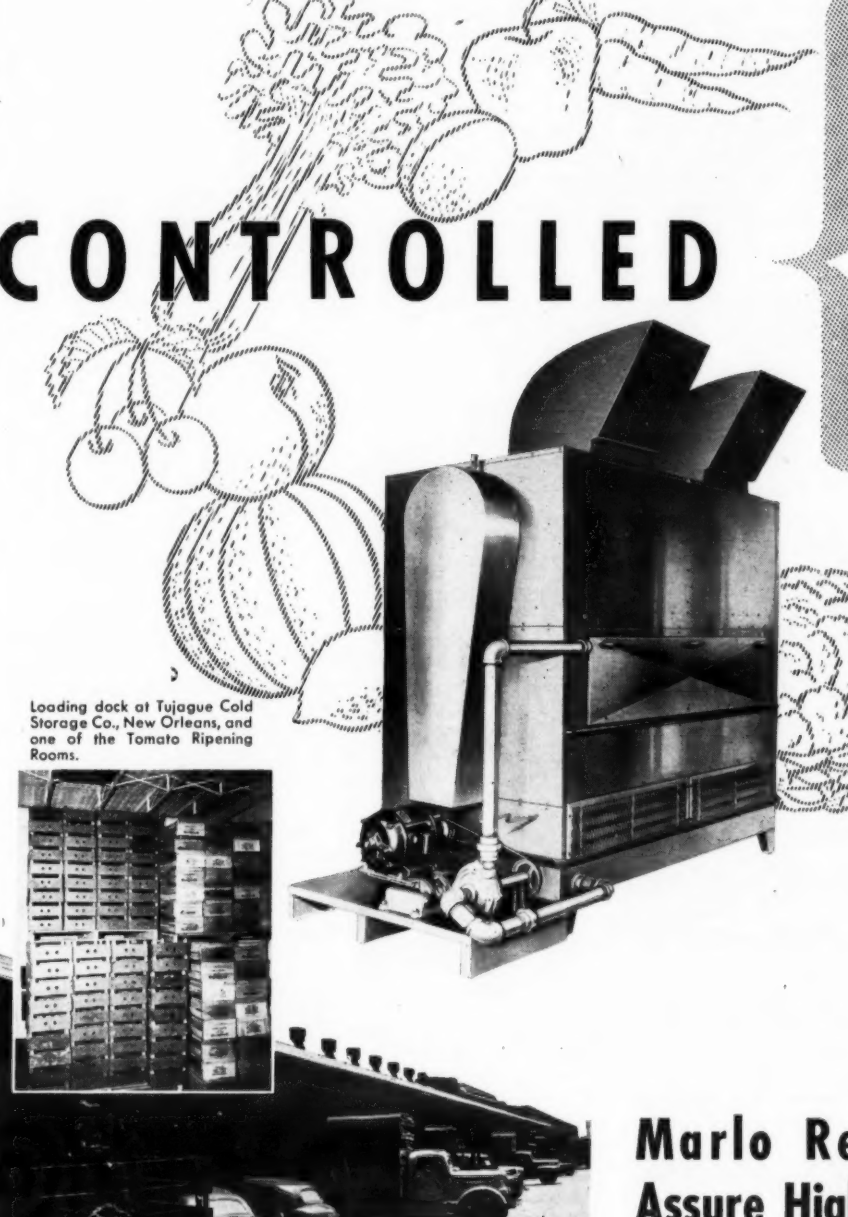
BLOOMFIELD, N. J.—The appointment of Edward D. Kremble as plant manager of the automatic heating division of the General Electric Co.'s air conditioning department was announced recently by F. J. Van Poppelen, manager of manufacturing.

Prior to his appointment, Kremble was plant manager of the Clark Equipment Co.'s lift truck plant in Battle Creek, Mich.

Rite-Way Refrigeration Files Articles of Incorporation

NEW YORK CITY—Rite-Way Refrigeration and Equipment Co., Inc. here, has filed articles of incorporation. Authorized capital stock was listed as 100 shares no par value.

Directors are Frank M. Cagno, 332 20th St., Brooklyn; Frank A. Giordano, 2163 W. 9th St., Brooklyn; and Herman B. Jacoby, 1180 Anderson Ave., Bronx.



CONTROLLED

TEMPERATURE
HUMIDITY
AIR
DISTRIBUTION

Marlo Refrigeration Units Assure Higher Cold Storage Profits

The Tujague Cold Storage Company of New Orleans depends upon flexible Marlo Refrigeration Units to hold fruits and vegetables at their varied "optimum" preservation conditions.

This confidence is understandable. Marlo Units are engineered to maintain the precise balance required between temperature, humidity and air distribution . . . For "wet", "dry" or low temperature storage rooms, they provide complete protection — and at lower cost.

Whatever your customer's needs . . . there's a compact, easy-to-install Marlo Unit ready to do a superior refrigeration job . . . and that means better business for you.

Installed with Worthington Compressors by Pan American Equipment Co., New Orleans. Weil & Moss, New Orleans, were the engineers.

Send for information on the complete Marlo line.

Marlo

COIL CO. • 6135 Manchester Rd. • St. Louis 10, Mo.

Season's Greetings

TO

ALL OF OUR DISTRIBUTORS,
ASSOCIATES AND FRIENDS

CUNNINGHAM PRODUCTS COMPANY

8790 Grinnell

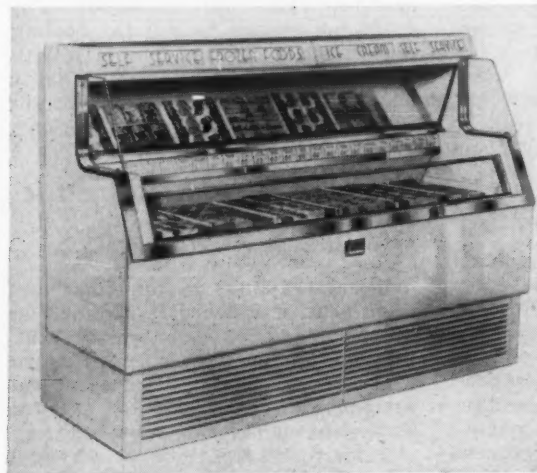


Detroit 13, Michigan

Telephone WAnut 5-7610-1-2-3

What's New

Product Accessibility Featured In Koch Case



the signs can be read from in front or either side. The case has a full-length, illuminated plate glass mirror, a full-length, illuminated price tag rail made of stainless steel, and a full-length glass display front made up of four lights of quarter-inch polished glass hermetically sealed into one unit.

Heaters and other specifically designed features maintain the impact of the basic design by reducing fog and condensation to zero except under most severe conditions, Koch said.

NORTH KANSAS CITY, Mo.—The latest addition to the line of Koch refrigerators—the model 1407 frozen food display case—will go on the market this winter after nearly a year of design and testing, the company has announced.

According to Koch, accessibility of product is a principle feature of the case. It is designed to project its message and the appeal of its contents to shoppers from a distance, the company pointed out.

Back-lighted translucent signs are set in the canopy above the display, and the canopy is shaped so that

The customer, standing in front of the case, can see every package on the top layer of the display, without stooping, it is claimed. Furthermore, the company noted, the display's top layer is placed at a height such that any shopper can reach in and get any package without sensation of discomfort.

The top of the front display glass is 39 in. from the store floor, and the top of the display is only 7 or 8 in. below the rim of the glass.

A ¾-hp. condensing unit is furnished, and plate coil dividers are set in the case in such manner to provide most cold near the top.

There are seven plate coils. In addition, the company said, Koch provides an exclusive feature in the form of an eighth plate coil at the back of the case, set at an angle above the display, which keeps the top layer of packages cold by radiation, and which is said to eliminate the defrosting problem by collecting frost before the moisture in the air can get down to the divider plate coils.

Model 1407 is of all-steel construction. Insulation is of the fibre glass type, and is at least 4 in. thick throughout. The main front panel is of porcelain, with stainless steel trim around the display.

best start to a
**Prosperous
New Year**

BEN-HUR
"World's Finest"
Farm & Home Freezers

Busiest salesmakers in 1949 were BEN-HUR Dealers! And they helped make BEN-HUR one of the hardest-working freezer manufacturers in the nation.

One reason, of course, is the BEN-HUR Freezer line itself. A new line, rich in new color beauty, new design, new performance features that struck an appealing chord in the mind of homemakers... a line of freezers rich in the kind of quality and value that makes selling easy — and satisfaction a sure thing.

YOU can depend on it, Mr. Dealer. The 1950 BEN-HUR line of Farm and Home Freezers will be like that, too. More of everything that's better—for easier selling. A ticket to freezer sales success — at a profit — that's what the BEN-HUR Line can promise you in 1950.

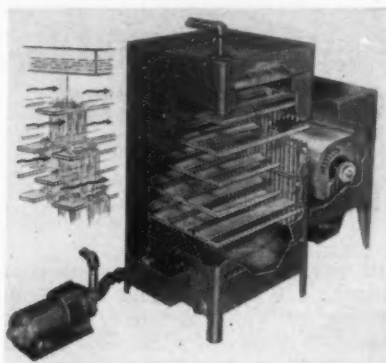
Check the BEN-HUR Dealer Franchise NOW — as your FIRST NEW YEAR'S RESOLUTION!



BEN-HUR 12.5 cubic foot Model 2129 with BEN-HUR BLUE Trim. Others—9.2 and 18.45 cubic foot sizes.

BEN-HUR MFG. CO. DEPT. AC, 634 E. KEEFE AVE. MILWAUKEE 12, WISCONSIN

BEN-HUR FARM AND HOME FREEZERS
HEALTHFUL LIVING THROUGH FROZEN FOODS



Cooling Tower Needs No Nozzles, Inside Piping

CHICAGO—A new series of Type "E" induced draft cooling towers for use with small "packaged" water cooled air conditioning and refrigeration condensing units has been announced by Binks Mfg. Co., here.

"This completely new type of cooling tower eliminates the use of nozzles and all internal piping, yet provides excellent cooling capacity," the company said. "Its exceptionally quiet operation and compact design make it ideal for use in homes and small businesses."

Type "E" units are "simple to install," being shipped assembled except for the air propulsion unit which is separate, according to Binks. Made of galvanized steel throughout, the towers are available in a wide range of capacities.

Operation was explained as follows:

"Warm water from the condenser of the refrigerating unit, is delivered to a water diffusion pan on top of the tower. The water enters the cooling chamber of the tower through perforations in the floor of the diffusion pan.

"Cascade type deck surfaces (staggered horizontal slats) in the cooling tower break the fall of the water and cause filming action.

"A quiet running slow speed squirrel cage blower draws air through the tower, setting up an intimate air-to-water contact. Maximum heat transfer is accomplished in this way.

"The air is exhausted through zig-zag, three pass drift eliminators which prevent drift from entering the blower chamber."

The towers may be installed either outside or indoors. Indoor installations must be in well-ventilated areas with open doors or windows for admitting fresh air. Discharged air from the tower is vented to the outdoors through a duct.

Separate motors are employed for operating the blower and water circulating pump. A full range of pumps and pump motors is available with the Type "E" towers to meet requirements of the associated refrigeration unit and the pumping head.

Installation and operating costs are low, the company claims.

The towers are described in full detail with complete specifications in Binks Bulletin 42, which may be obtained by letter to the company, 3122 Carroll Ave., Chicago 1.



Oven Temperature Tester Improved by G-E

SCHENECTADY, N. Y.—An improved oven-temperature tester has been announced by the meter and instrument divisions of the General Electric Co. here.

Redesigned for portability and ease of operation, the device can be used by domestic-range installation and servicemen to check the calibration of gas and electric oven-thermostat indications against actual oven temperatures.

In addition, it can be used for production testing of new range ovens and for demonstration checks on ovens by appliance dealers.

The device consists of a 3½-in. square flange thermocouple thermometer mounted in a small leatherette-covered case with a compartment for storing the thermocouple leads and assembly.

The thermocouple leads are of color-coded iron-constantan wire, 5 ft. long. The welded (hot) thermocouple junction is surrounded by a radiation shield which prevents radiation errors from affecting true reading. A spring clip is attached for clamping the thermocouple to the oven grill.

The instrument, a sensitive d.c. millivoltmeter, has a scale range of 0 to 650° F. and a scale length of 2.46 in. The accuracy of the instrument and thermocouple at any set point is plus or minus 2½% of full-scale value.

York Booster Compressor Designed for Ammonia

YORK, Pa.—A rotary booster ammonia compressor for use in low temperature applications such as ice cream manufacturing, packing plants, and the quick freezing of food products, was recently introduced by York Corp., here.

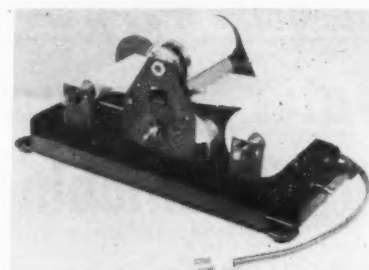
The York rotary booster compressors are especially suitable for increasing economically the capacities of existing low temperature systems where requirements have grown beyond the present capacities of the plant.

Booster compressors are installed on the lowside in series with the high-stage compressor. They provide capacities ranging from a few tons up to 250 tons in a single compressor.

The operation of the York booster compressors is such that they always start unloaded so that special high torque motors are not necessary.

Motor selection is governed by the pull-down requirements of the job, and normal torque motors are satisfactory for all applications.

York has been using similar compressors in connection with "F-22" and "F-114" refrigerants for a number of years.



Small Glycol Vaporizer Designed for Home Use

NEWARK, N. J.—A new model, room-type glycol vaporizer that uses the patented vapor roll method of glycol diffusion has been introduced by Air Purification Service, Inc.

The new unit, called the model 5-B, is designed to treat the air in an ordinary size room or office with triethylene glycol vapor for the control of infectious air-borne viruses and bacteria considered by medical authorities to be the probable cause of many common respiratory infections, according to the manufacturer.

It operates automatically by plugging in to a 110-volt, 50-60 cycle a.c. electrical outlet. A nine-point control dial permits varying the concentration of glycol vapor in relation to the size of room.

A 250-ft. roll of glycol impregnated paper is said to last approximately four weeks under average conditions. The paper, placed in the vaporizer, is made to pass over a heated roller at extremely slow speeds controlled by the dial. As the paper passes over the heater, it introduces into the air a precisely controlled amount of glycol vapor.

One part of glycol vaporized in approximately 400 million parts of air is the correct diffusion, according to the manufacturer. The machine is said to assure proper ratio at all times.

APS glycol vapor is odorless and harmless to humans, the manufacturer claims. Rising from the machine, it looks like cigarette smoke but becomes invisible a foot above the vaporizer.

The new vaporizer measures 14 in. by 7 in. by 7 in. It weighs 10 lbs. and can be moved from room to room at any time. The case is made of plastic.

The home unit is said to be a counterpart of the commercial type unit now being made by Air Purification Service.



Superfan portable blower with Snap-on heater.

Snap-on Heater Fits All Superfan Portable Units

ALBERT LEA, Minn.—Now available for all models of "Superfan" portable blowers is a new "Snap-on" electric heating attachment that converts the blower to a portable forced air heating unit.

The heating attachment operates on 110-volt, 60-cycle, a.c. only and is manufactured by Queen Stove Works, Inc., Albert Lea, Minn.

This new Snap-on heating unit fastens to any Superfan, as shown in the illustration, in just one simple action and makes it a handy portable heater.

An automatic shut-off switch turns heating unit off automatically if, for any reason, it should become over-heated.

REFRIGERATION & AIR CONDITIONING
UNITS • PARTS • TOOLS • SUPPLIES

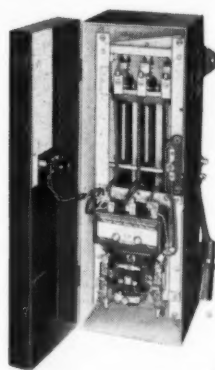
AIRO delivers to your door. Order by mail--depend on our fast nation-wide service.

Write for catalog 49A on your letterhead.

AIRO SUPPLY CO.
2732 N. ASHLAND AVE., CHICAGO 14, ILL.

VELVET-SMOOTH COMPRESSOR STARTER

No Jolts to Belts or Machines—No Heavy Current Inrush



ALLEN-BRADLEY MOTOR CONTROLS
for Air-Conditioning and Refrigeration.
Manual & automatic across-the-line starters.
Compression-type velvet-smooth starters.
Pressure and temperature switches & controls.
Relays and contactors from 1 to 8 poles.
Push buttons and selector switches.



ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

When you have a big compressor installation... or any job involving the starting of a heavy flywheel load... specify an Allen-Bradley Bulletin 640 (Manual) or Bulletin 740 (Automatic) compression resistance starter. These starters will accelerate the motor from standstill to full speed with velvet smoothness. They are easy on belts, chains, and gears, because machines are started without a jerk. Send for Bulletins 640-740. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.

Plastics In Refrigerators

Greater Use of Them Might Lead to Smaller and Cheaper Models, But Many Problems Remain To Be Solved

CHICAGO—There's a wide-open field for additional uses of plastic products in household mechanical refrigerators, it was brought out at the Domestic Refrigerator Engineering Conference at the annual ASRE meeting here, but many problems remain to be solved by producers of plastic materials and molders of plastic parts before such potentialities can be realized.

O. E. Norberg of Crosley presided at the session and Walter Kuenzli of Servel handled the discussion period. O. H. Yoxsimer of the Westinghouse appliance division made the formal presentation on "Application of Plastics In Domestic Refrigerators."

What Industry Needs

Yoxsimer summarized the needs of household refrigerator producers with respect to the kind of characteristics desired in plastics as follows:

1. Low costs.
2. Good clarity and wide color range.
3. Good surface appearance and mar resistance.
4. Optimum combinations of flexibility with good shatter resistance and rigidity.
5. Good moldability—uniformity. (The piece that comes from the mold tomorrow will be the same as the one that comes from the mold today.)
6. Best possible moisture resistance—dimensional stability.
7. Little or no odor.
8. Paintability.
9. Greater sag resistance.

The Westinghouse engineer then offered some suggestions to resin suppliers and molding firms as to what the industry might be looking for in the future in the way of plastic parts, the primary end being "to produce a better refrigerator at lower costs." Here are some of the things Yoxsimer specified:

Thermal Insulant Properties

"A better thermal insulant with lesser bulk storage requirement. Most of us feel kindly toward inorganic insulants, but our minds are not closed to organic plastics. The cellular and foamed plastics such as urea, phenol, polystyrene, and cellulose acetate, with which we all are familiar, have not proven too satisfactory to date. Thickness for thickness, none of them compare too well with insulants already available regarding thermal conductivity.

"While the ureas and phenols solve the bulk storage problem, their odor is unsatisfactory. The polystyrene and acetate materials also solve the bulk storage problem, but aeration or foaming requires even greater floor space.

"A molded plastic food liner with integral breakers certainly looks attractive. Likewise a molded outer door and shell. One manufacturer of laundry equipment is producing tubs and various other parts from polyester resins reinforced with glass fibers. It appears that even today we are not too far from low-pressure molded food liners and outer shells using glass fibers as a filler.

"The brittleness and cold flow characteristics of polystyrene might be improved by the use of glass fibers. The answer to the shelving problem might be found in some such combination where proper attention has been given to cold flow of sag resistance.

"Rubber is the best available answer to the door gasket problem. But let the plastic suppliers give us

an extruding material with better age, grease, and light resistance, even with cold flow only equal to that of rubber, and watch it appear on every refrigerator if costs are not excessive.

"A white, low cost, odorless, non-hardening, viscous adhesive would be welcomed by all of us as a sealing material. And who could not use a non-shrinking, self-curing, putty-like substance that could be placed around tube entrances to replace the molded rubber grommets and rubber latex now used."

Yoxsimer said that in his opinion, "there is still much to be desired, even for the many applications in which refrigerator manufacturers now employ plastics." He said that he had contacted most of the designers in this field for their opinions, and came up with the following general criticisms.

The One-Piece Inner Door

"The one-piece molded breaker strip or inner door has cost, appearance, and thermal loss advantage over any combination of metal and plastic design. Injection molding pieces of such size are not yet a reality so we still have laminated phenol and the like to consider. For these and most other such large items we need low costs, dimensional stability, a good surface with range of color, rigidity with shatter resistance, good age, and light resistance, and low odor.

"To approach this we must not employ cellulose as a filler. Who among us has not witnessed, with dismay, the growth and subsequent warpage resulting from the almost unquenchable thirst of parts made from these materials?

"Odor is a constant threat for we are dealing with materials and chemical reactions that can result in odor of high order. Those of us requiring color have had a constant battle with the finishing problem—adhesion, porosity, low density areas, mold parting agents are all common trouble terms to each of us. Distortion or warpage prior to assembly has given us no end of trouble, and brittleness has been costly.

Who Polices Processing?

"Our paint suppliers police our processing setups almost weekly to make certain that we are obtaining maximum results from their materials. There is little evidence that the plastic resin manufacturers have such interest in their materials. Something must be done not only to obtain the stability in functional performance we need, but to assure that what comes from the mold today will be the same as that obtained tomorrow.

"What effort is being made to take full advantage of 'pin point' gating in the molding of polystyrene? Should the matter be left in the hands of the molder or should the manufacturer specify it in his drawings?

"The modified high impact polystyrene is much tougher than the regular material, but without a satisfactory surface and color it cannot be used too widely. Weld lines with a 'wanderlust,' variations in shrinkage at heavy sections, 'laminated' or 'honeycombed' areas are most unsatisfactory.

"Polystyrene must be treated to prevent dust pick-up. The permanence of this coating does not satisfactorily meet the requirements dictated by subsequent handling and

cleaning. The fact that solvents commonly employed in cleaning the exterior of the refrigerator during assembly cannot be used in the same area as polystyrene is quite bothersome. What insurance do we have that our dealer or the customer might not expose it to such solvents?

"Sag resistance or lack of cold flow is most important in applications such as pans and horizontal baffles, where we also need the toughness and shatter-resistance that comes with a molding free of internal strains.

"If we use polystyrene breaker strips, evaporator door, baffles, meat and vegetable pans, all in the same refrigerator, odor becomes a major problem."

The ensuing discussion on the problems and techniques of producing plastic parts for refrigerators got pretty involved on the technical side, which brought forth the following comment from Bill Renner of Carrier Corp., who said:

Says He's Discouraged

"I came here to be encouraged about the use of plastics, but I am being discouraged. The suppliers and molders can't seem to agree on how well a piece will meet and hold dimensions after it comes from the mold. It is up to the plastics industry to achieve uniformity in its product."

Following is the comment of some of the discussers, in "condensed" or capsule form:

"A 7-cu. ft. refrigerator has that much or more space devoted to insulation in its walls. That should be a real challenge to the plastics people."—Knight of General Electric.

"Further development in foamed ureas may be an answer on the insulation problem."—Van Buskirk, U. S. Rubber.

"Inner walls and outer walls of refrigerators are now good heat conductors. If they were to be made of non-conducting materials, the insulation problem would be materially reduced. The challenge lies with the machinery manufacturers to develop a molding machine that will be devoted to making a specific product like an inner liner."—Dailey, Wolverine Plastics.

Adheres to Rubber

"Differences between materials—plastics and metals to be specific—becomes a problem of importance when you are working with them to make one product. Where plastic adjoins rubber, it is likely to adhere unless some permanent lubricating factor is incorporated into the rubber."—Cooper, Amana Society.

"What do polystyrene pieces do after they leave the mold? Do they shrink and change dimensions, and do they finally reach a stable point? On close fits this is a highly important factor."—Hinkle, International Harvester.

"Polystyrene pieces should reach equilibrium 24 hours after molding. They may undergo dimensional changes of a measurable degree, which may be due to variations in the temperatures in which they are handled. It is possible that some mean temperature condition may have to be specified in the working and handling of plastics immediately after working."—Van Sickle, Dow Chemical.

"The changes that take place in plastics over a long period of time are important. Is it a matter of stresses because of high pressures? What are the possibilities of pre-plasticizing and using lower pressures?"—Sperry, International Harvester.

"Tests we have made indicate that dimensional change is not a matter of shrinking, but rather of variations in the product as it comes from a die."—Finn, Standard Products Co.

If Dies Are Moved—

"If you move a die from molder to molder, have them make up odd pieces and look at them under polarized light. Look for unnatural strains, varied flows, and the like. Natural

strains come from shrinkage and design problems, but the unnatural strains are the result of handling."—Blunt, Bakelite Co.

"There is a pretty good area of agreement on dimensional stability and coefficient of thermal expansion, but there is a need for setting up of standard conditions for molders."—Glick, Monsanto Chemical.

Molder Must Hold Dimensions

"The molder has the obligation to hold dimensions to print. We believe the use of shrink fixtures should be discouraged. The time cycle, heat, and pressure are the important factors in the shrinkage effect. Makers and users of plastic parts should employ greater check in and the quality control type of inspection."—Poupard, Nash-Kelvinator.

"Tooling program time for molders is too short. They don't get a chance to find out if the piece will hold up until it is put on the product. Die delivery time is when production is to start."—Finn Standard Products.

"There are other problems with plastics. The static accumulation factor with polystyrene brings problems of dirt pickup. Where parts will be seen on showroom floors and in every day use, and dirt has collected from storage or shipments, correction will be needed. Some coatings have been tried, but result in only temporary relief of the problem."—Scharmer, Norge Div.

What About Coatings?

"Will ordinary coating on plastic parts be removed by the general run of household cleaning agents of the abrasive type?"—(Miss) Tennyson, Sears, Roebuck. (The answer was

given by someone as "yes" because they are generally merely a wax coating, which will wash off.)

"There are some good coatings on the market. Bee Chemical Co. of Chicago has developed its 'Logoquant' coating which has been tested on plastic Nash dashboard panels, and tests have indicated that it is no more dirt-catching than metals."—Kuenzli, Servel.

"Is it possible for the refrigeration engineers and the plastic engineers to get together to develop standard procedures for testing at the molders, and also at the plant of the refrigerator producer? I think the Society of Plastic Engineers would be glad to name a committee to work with refrigeration engineers on the solution of such mutual problems."—Haaxma, Wolverine Plastics.

Booklet Describes Testing Of Insulation Materials

TOLEDO—A new 36-page publication entitled "Testing Methods and Facilities Used on Fiberglass Products," has been issued recently by the Owens-Corning Fiberglass Corp. here.

It describes the facilities and procedures employed by the firm in its testing laboratories at Newark, Ohio and Ashton, R. I., to provide accurate data on the properties, uses, and performance characteristics of fiberglass materials in their various forms.

Included is a section on the testing of thermal and acoustical materials that tells of test methods used on insulation for ranges, water heaters, and refrigerators.

Copies of the publication may be obtained by writing the company here.

NOW an all new GENERAL ELECTRIC SINGLE-PHASE CAPACITOR motor



Meet the newest member of the famous Tri-Clad® motor family—G.E.'s new single-phase capacitor motor! Sold by itself or built into your machines, you'll find it's got more salesworthy features including freedom from radio or television interference. For complete data, write for Bulletin GEA-5401, Apparatus Department, General Electric Company, Schenectady 5, N. Y.

These 4 wanted Features
in a complete line from 1/2 to 5 hp

LIGHTER,
MORE
COMPACT
to save space,
shipping costs!



LONG-LIFE
BEARINGS
will run for
years without
re-lubrication.



A TRANSFER
MECHANISM
that has no
rods, pins to
wear or get
out of order!



A TERMINAL
BOARD
to make instal-
lation easy!



GENERAL ELECTRIC

754-12



Wall

WIRE

PRODUCTS COMPANY

Manufacturer of...

REFRIGERATOR SHELVES · STAMPINGS
FORMED AND WELDED PRODUCTS

Our very best wishes for a Merry Christmas, and for a New Year that will prove to be all you desire.

WALL WIRE PRODUCTS COMPANY Plymouth, Michigan

Decreasing Water Levels In Many Areas Indicate Necessity of Closer Watch over Domestic, Industrial Use

ATLANTA—The need for conservation of water levels in many sections of the country is such that it may seriously affect future installations of air conditioning and heat pump equipment, it was brought out recently by Ralph H. Baker, Jr., staff engineer of the Bureau of Sanitary Engineers, Florida State Board of Health.

Speaking before the general sales conference of the Southeastern Electrical Exchange, Baker explained some of the general problems that are contributing to the water crises that are popping up more and more often and offered some basic considerations for regulating the future use of water for the benefit of the entire community.

His talk, slightly condensed, follows:

Ground water is that immense body of water found at varying distances below ground level generally moving down gradient in all directions away from "water highs" or recharge areas, toward valleys and low areas in the water surface where discharge from the reservoir takes place through leakage in river valleys, springs, and the sea basin. Scattered farmhouses have wells which pierce the ground water level and which have a draft of several gallons a minute, hardly making a dimple in the ground water surface.

The community well for a hundred houses cannot be said of itself to have an effect on the general depth of ground water level, although a number of community wells fairly close together may lower the ground water surface a small distance for a few hundred feet beyond the perimeter of the communities.

Rainfall Is Big Influence

The operation of these wells, however, would have less effect than the seasonal variation in rainfall over the area.

Numbers of large industries grouped near a city, each pumping steadily from scores of modern high-capacity wells, have the greatest man-made effect on ground water level.

They may cause the surface of ground water to recede hundreds of feet; wells may go dry, and pumping costs may go up. It is then that the value of this nearby source of water is realized and measures are taken to conserve it.

Ground water ordinarily is pure and uncontaminated. Its mineral content usually is easily corrected so that water can be made suitable for potable and industrial uses rather inexpensively.

We have learned that ground water must be kept in its natural state and all man-made poisons and pollutions must be prevented from percolating downward and mixing with it.

The ground water problems may be classified as follows:

1. Salt Water Encroachment—The encroachment of salt water into sources of fresh water along coastal areas, especially in Florida, is the most serious water supply problem at present.

In many places along the coast where large populations or heavy industrial usage have required large withdrawal from underground water, salt water has moved into the formations from the sea and encroached on fresh water reservoirs to the extent that other sources of potable water must be sought and important industrial and municipal water sources and equipment must be abandoned and scrapped.

Salt Water Moves In

In every case salt water encroachment has been brought about by overpumping of the fresh water supply or the development of uncontrolled drainage systems.

It is simply a case of pumping or draining more water from the formation than can be supplied through cavities and interstices of the formation from the contributory or recharge area.

2. Salt Water Pollution through Formation Water and Salts—A somewhat related problem and one often confused with that of salt water encroachment is the scarcity of fresh water in some areas. In these areas wells commonly produce salty water even though the artesian water head is high.

It is obvious that with an artesian head of 20 ft. or more it is impossible for sea water to encroach on the underground fresh water in the artesian aquifer. The artesian water has been contaminated by salt water or salt which was trapped or deposited in the water-bearing formation during past geologic history. These salts are now being flushed out by fresh water.

3. Pollution of Groundwater through Sewage, Citrus, and Industrial Wastes—The disposal of raw sewage and industrial wastes into the underground waters through sink holes and drainage wells is another most serious groundwater problem in Florida, and so far as public health is concerned it is the most important.

Prior to the enactment of statutes forbidding the disposal of untreated wastes and sewage in this manner, large quantities of these wastes, saturated with organic acids, were discharged underground.

Limestone Absorbs Wastes

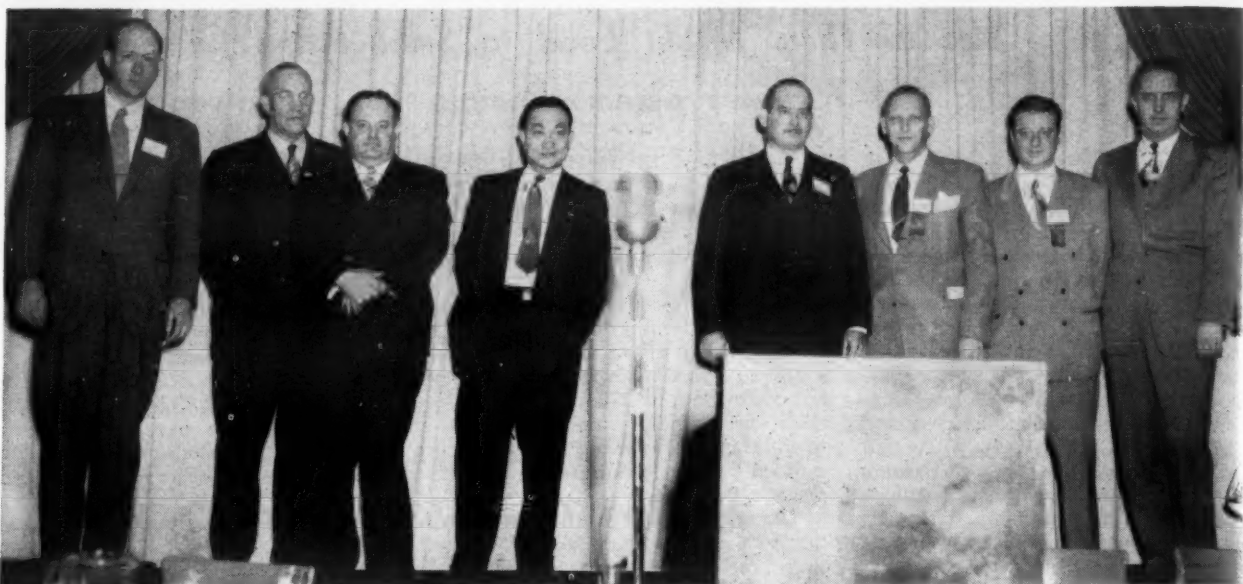
Aided by porous and cavernous nature of the limestone and by its reaction to the acids in the sludge, this material spread over a wide area and the limestone has absorbed and is holding large quantities of this material at the present time.

Some relief from this polluted water may be obtained through drilling wells into deeper water horizons that are separated by beds of low porosity from the upper beds. This water may or may not be more mineralized but is more costly to develop.

4. Availability of Water to Wells—In some areas water simply is not available in either or both the quantity or quality desired.

In some parts of Florida, for example, the upper limestone is so tight that it yields insufficient water and deeper formations must be penetrated before a sufficient quantity of water can be had. This deeper drill-

Here's the Line-up on ASRE's New Officers



At a hasty glance, the above group might look like the police "show-up," but actually they're all strictly "legitimate." They just happened to be lined up this way when they were inducted as the new officers and directors of the American Society of Refrigerating Engineers. From left to right are four new directors—Frank H. Faust, Rowland H. Lock, Arthur J. Hess, and George K. Iwashita—and the new officers: President John G. Bergdoll, Jr., Vice President Paul B. Christensen, Vice President Edward Simons, and Treasurer R. C. Jordan. Herman F. Spoehrer was also elected a director.

ing is more costly not only in well construction but also in the type of pump required.

In other areas, the water is highly mineralized and expensive plants and costly treatments are required to make it potable. Studies of the recharge areas and the transmissibility and geology of the formations are required to understand and help decrease the seriousness of this problem.

5. Waste of Water—Where the water from flowing wells is allowed to flow freely without beneficial usage, the water is being wasted and permanent damage is being done to the state by lowering the head of water, increasing well construction costs, requiring well work-overs, and possibly adding to the cost of flood hazards. Lowered heads of water along coastal areas allow encroachment of salt water.

Water is also being wasted through improperly cased wells, where water from the bed rock is allowed to escape into the upper deposits. In addition, some of the casings in old wells have corroded to such an extent that they are leaking and water is allowed to waste.

Water waste can be prevented by legislation or by an aroused public opinion that requires wells to be properly constructed and that flowing wells be equipped with valves and shut offs when the water is not being usefully employed.

6. Overdraft of Wells—This at the present time is not a problem in Florida, but it will be eventually as the population increases and as the draft of water becomes greater.

Our 52 to 53-in. average annual rainfall gives a good margin of operation. Overdraft from the aquifer is the lowering of water levels beyond the economical pumping limit.

In order not to have this problem, studies of the capacity of the formation to deliver water to an area, the amount of, and areas of recharge to the formations from rain and surface flow, and the geology of the contributory areas must be made. From these local limits of drawdown, rate of pumping, and spacing of wells may be set.

Data on Ground Water Use

Let us look at some recent figures as they pertain to the use of ground water.

Pumpage—Areas of greatest withdrawals are Los Angeles (360 million gals. per day); Long Island, N. Y. (280 m.g.d.); Houston, Tex. (160 m.g.d.); Memphis, Tenn. (105 m.g.d.); and San Antonio, Tex. (100 m.g.d.).

States of greatest withdrawal are: California (5,625 m.g.d.) chiefly irrigation; Arizona (1,550 m.g.d.) chiefly irrigation; Texas (1,325 m.g.d.) about half irrigation; and New York (660 m.g.d.) chiefly public supply and industrial. These estimates are based on a canvass made by the Geological Survey.

Water Levels—During the period involved (1947-1948), there was no nationwide decline of the ground water level. In many states water levels were at or above average levels.

However, progressive declines continued in nearly all heavily pumped areas. Indianapolis and Long Island being exceptions. Critically low levels occurred in several areas in Louisiana, California, and Texas, and progressive declines continued in areas in

Arizona and New Mexico, and at Pittsburgh, Memphis, and Louisville.

For more than 10 years the New York State Water Power and Control Commission has required conservation of ground water from well supplies exceeding about 60 gals. per minute in capacity used in cooling the air in summer in theaters, stores, etc. to be circulated in tight pipes of non-corrodible metal and returned to the ground.

Early 'Return' Wells

Were Poorly Constructed

The success of this requirement was not too great at first because of lack of experience in constructing return wells. As a result of the frequent failure of such wells, the rule was often violated and the water sent to the sewer.

Gradual improvement in design of the return wells greatly increased the success of the operation and a high and increasing percentage of the cooling water is now being returned to the ground. The temperature of the pumped water has been markedly increased in some cases by heating the ground.

An Act which makes provisions similar to these in New York state but applicable to well supplies of more than 200 g.p.m. in capacity was passed in 1947 in Indiana and became effective on Jan. 1, 1948.

A typical example of ground water recovery is at Flatbush, Kings County, Long Island, N. Y. Pumping at the rate of approximately 25 m.g.d. from about 30 deep wells distributed over an area of about 6 sq. miles in Flatbush ceased abruptly on June 30, 1947, when the City of New York turned city water into the area after condemnation of the private water company which for many years had supplied this territory from wells varying from about 150 to 430 ft. in depth.

Static levels of ground water were from 10 ft. to 35 ft. below sea level and salt water intrusion had hurt the quality of the water.

The U. S. Geological Survey has been using a number of the wells to determine the rate of rise of static level since the cessation of pumping. There are a number of other wells still operating in Flatbush, but not of great aggregate capacity. There is also a larger draft from industrial wells north of Flatbush so that the rise in static level is not entirely related to the cessation of the main draft.

The Geological Survey reports that the recovery in Flatbush in the 18 months since cessation of use of the wells has ranged from 7 ft. to 15 ft. and has averaged 10 ft. Measurements of the Geological Survey show that the water table in more than half of Brooklyn now lies above sea level.

Similar recoveries have also occurred in the Jameco artesian beds, with the piezometric surface lying about a foot below the water table. The rate of recovering in the water table is now greater than the rate of recovery of Jameco artesian levels whereas the rate was more or less similar immediately after shutdown.

From a study of water conservation and legislation which has been passed by various states in this country and by other countries throughout the world, it is possible to set down certain basic considerations which appear to be fundamental.

1. The doctrine of riparian rights

(One who owns the land adjacent to a body of water may make reasonable use of the water) should be superseded by the doctrine of prior appropriations as the basic concept on which the legislation is passed. While this means a far-reaching change it appears to lead to the fairest and most equitable development for use of the average water supplies of any area.

2. It should provide a specified priority of usage. A study of existing legislation indicates that priorities, in order of precedence are usually as follows: domestic, municipal, irrigation, industrial, recreational, and power development.

It is conceivable that while there would be no change with respect to the first two, the relative ranks of the remaining uses might be varied in different localities for the best interest of all concerned.

3. Legislation should specifically exempt water for domestic use and use with home stock and gardens.

4. Such legislation should be administered by a state authority.

5. Relief should be provided in the courts for all riparian users whose existing rights or investments might be adversely affected by a change to the Doctrine of Prior Appropriations.

6. The term, "Beneficial use" would be "the basis, the measure and the limit of the use of water."

7. With respect to the regulation of the use of ground waters, it should be recognized that ground water withdrawn from an aquifer in any quantity must inevitably result in the lowering of either heads or pressures, as the case may be, and reasonable limits within which such heads or pressures may be lowered without constituting interference with the rights of another user should be clearly set forth.

NEW G&E CATALOG
REFRIGERATION PARTS • ELECTRICAL SUPPLIES

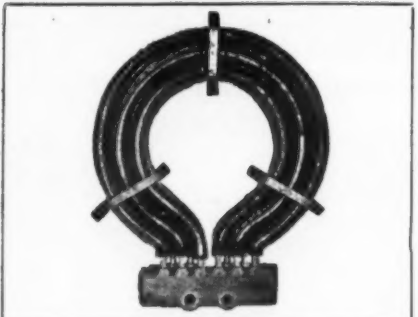
Yours for just a 3¢ Stamp

SEND FOR IT TODAY ON YOUR LETTER-HEAD.

G & E EQUIPMENT SUPPLY CO.
OGDEN AT FULTON
CHICAGO 7, ILL. HAYMARKET 1-0240

ROME-CONDENSER

★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY
RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

30 Years' Reputation for Dependability

Lipman
REFRIGERATION and AIR CONDITIONING

General Refrigeration Division
YATES-AMERICAN MACHINE CO., Beloit, Wisconsin

for draft and bottle
beverage coolers...

IDEAL
Speed-Freeze
PRODUCTS

IDEAL COOLER CORPORATION
2953 EASTON AVE., ST. LOUIS 6, MO.

REMCO
STANDARD DUTY
DRIERS

now with **MOLDED Du-Cal Drierite** and **SPUN ENDS**

For the first time... a low cost liquid line Drier with Molded Du-Cal Drierite. Refrigeration flows through the "flow joints" and around the highly efficient molded drier element where the moisture is instantly absorbed by chemical action. No Pressure Drop and no new End construction eliminates all body joint failures. In either other SWEAT or Flare End Connections.

Literature and Prices on Request

REMCO INCORPORATED
ZELIENOPLE, PA.

Postwar Problems Set Pattern

Textile Mills Lead Industry In Accepting Air Conditioning Because Ideal Atmosphere Is Vital

NEW YORK CITY—The outstanding development of air conditioning in the textile industry since the end of the last war has established a pattern for industry and will continue to modify air conditioning techniques as further textiling advancements are made.

So P. L. Davidson, consulting engineer of Philadelphia, told the American Society of Mechanical Engineers at its recent 70th annual meeting in the Hotel Statler here. He read a paper prepared in collaboration with an associate, John deB. Sheppard.

"It is quite natural that the textile industry should take the lead in air conditioning in the industrial field as from the inception of mass textile production, control of atmospheric conditions as an essential to proper fiber processing has been an industry problem," said Davidson.

"In fact, the phrase 'air conditioning' had its birth in the textile industry where the process of controlling the temperature and humidity of the air within mill interiors was primarily considered as conditioning yarn by means of air.

"Even prior to the development of factory textile production, when the industry was still operated on a 'cottage' basis, the finest production was obtained in those sections of the world where natural climatological conditions favored the processing of the fibers."

Responsible for changes in air conditioning systems, he said, are the inventions of hundreds of new machines like the double deck twister and the design and production of new fibers to meet the varying fashion trends requiring very sudden changing of the arrangement of machine operation.

He explained that the substitution of fibers such as nylon for silk, rayon for cotton, or spun for filament yarns, requires changes in the relative

humidity required for the process. This change in styling necessitates changes in the capacity or distribution of the air conditioning system, he said.

The days of moisturizing the air by wetting the floor with a hose or by mechanically spraying moisture into the air, are over, according to Davidson. Recent years have brought several new engineering developments, among which are the unitary and central station systems of air conditioning, electrostatic filters, the elimination of windows in factories, changes in wall structures and insulation techniques, refrigeration, and several others, he said.

"Thermodynamically, there is no difference between a unitary and central station system," he points out. "The accurate difference is in the size only."

The housing required for a central station is usually of a size the average mill cannot provide on its machine floor, so the unitary system, which consists of small single units suspended from the ceiling, is more desirable because of space, he explained. However, maintenance on these units is high, he added.

"The increased operating efficiency and decreased maintenance cost of a central station will compensate for the increased capital cost of the central station and its apparatus room," he declared.

The problem of cleanliness, Davidson noted, has given rise to electrostatic filters which have replaced the inadequate air washers and oil and cloth filters. Cotton fabrics which go through a drastic bleaching and finishing process are free from industrial air dirt unless they are soiled during the weaving process.

"Rayon and other synthetic fabrics," he said, "do not go through such finishing processes and soil or dirt introduced in the fabric in the weave room is not removed in the finishing process. The result is a 'second' or inability to produce a pastel or light shade fabric."

Since the electrostatic filters are more readily adaptable to the central stations, this fact provides another reason why central stations are more desirable than the unit system, he said.

The third air conditioning innovation, the elimination of windows, is a more revolutionary one, Davidson stated.

"From a functional point of view, windows have only two excuses for existing—light and ventilation or cooling," he said. "Daylight construction failed to give the light required as measured by today's standards. The sunshine produced so much glare that shades had to be provided or windows painted. The volume of air that a modern textile mill requires for cooling is impossible to obtain through open windows. Therefore, windows fail in their only two functional reasons for existence."

Modern mills should be built without windows, he said, and existing mills should do away with them by bricking, since it is impossible to control "within the desired tolerances," the temperature and humidity in areas adjacent to them.

He indicated that this latter point is important because the strength of cotton fiber, for example, is approximately 50% greater, the elasticity 20% greater and the strength before rupture more than double at 75% relative humidity than at 40%. Be-

yond a relative humidity of 75% the strength falls off and the elasticity increases rapidly, so windows which interfere with temperatures by drafts and humidity by condensation should be eliminated.

Wall construction and insulation gives rise to the problem of heat loss and gain, Davidson asserted. From this standpoint, he explained, a 13-in. brick wall would be perfectly satisfactory. Seasonal temperature changes, however, determine whether or not insulation is required to prevent condensation. Vapor seals should be used wherever steel angles are found because serious condensation will otherwise result, he added.

Davidson gave three reasons to justify the expense of insulation: it dampens out the variable sun load effect on the roof, in many cases it is necessary to prevent condensation, and in the case of a wood roof, which is impossible to vapor seal from the inside, condensation and eventually deterioration is often experienced within the wood planks themselves.

He said refrigeration has gained increasing importance during the last few years for the maintenance of constant temperatures. This has been motivated by the fact that the increased efficiency of machines is brought about by refrigeration, he declared, citing this example:

"In a 600 XD Draper loom mill operating on rayon fabrics with a thoroughly modern air changing humidifying system, the loomstops ranged from 2.3 to 5.4 per producing loom hour. The loom efficiencies averaged 92.6 and second quality ranged between 15% and 16%."

"When refrigeration was added to this unit, the loomstops over a range of two months were from 1.2 to 2.9 and efficiencies averaged 96 plus % with the second quality dropping to a range between 4% and 7%. When refrigeration was stopped for adjustment, it was found that the loom stoppage and efficiencies almost immediately reverted very close to the original findings."

Clarence E. Young Resigns From Philco Distributors, Inc.

NEW YORK CITY—Clarence E. Young, 41-12 41st St., Sunnyside, N. Y., has resigned from Philco Distributors, Inc., New York City, in order to take an extended vacation.

Young has been employed as service manager of the refrigeration and air conditioning department for the past four years. He will be vacationing at his summer home at South Hadley Falls, Mass.

Walter Joins Atlanta Firm

ATLANTA—W. W. Crowe, president of the Electric Supply Co., has just announced the appointment of Perry Walter as manager of the firm's appliance division. Prior to joining the Atlanta firm, Walter was associated with Westinghouse.

Deepfreeze Distributor Named

CHARLOTTE, N. C.—Williams & Shelton Co., Inc., here, has been appointed distributor of the Deepfreeze line of home freezers in the Piedmont and western areas of the Tar Heel State and all of South Carolina.

\$2,000,000 Building To Be Air Conditioned

CHARLOTTE, N. C.—Plans for the immediate construction in Charlotte of an 18-story air conditioned office building costing \$2,000,000 have just been announced here by J. H. Carson and Homer A. McNeely of the Carson Realty Co., acting for out-of-town clients whose names were not disclosed.

Carson said the new structure will be air conditioned throughout, thus giving to Charlotte what is believed to be the first completely air conditioned large office building in the two Carolinas.

Formica Table Tops Now Made Better and Faster

ELGIN, Ill.—Johnson Plastic Tops, Inc. here, has announced that through the use of new bonding equipment, Formica table and counter tops of extraordinary smoothness are now being produced.

The new, smoother surfaces are expected to prolong the life of table and counter surfaces.

Another advantage of this bonding process is that custom table and counter requirements can be produced in less time than formerly.

Elias Files Business Name

BUFFALO—A business name has been filed in the Erie County clerk's office for the Elias Furniture & Appliance Co., 1426 Fillmore Ave., by Asa G. Elias.

Eutectic Book Covers 'Low Temperature Welding Alloys'

NEW YORK CITY—Latest metal-joining information on Eutectic "Low Temperature Welding Alloys" is now available to all welders, in the Eutectic Directory Welder for 1950, the Eutectic Welding Alloys Corp. here announced recently.

Featuring 65 EutecRods for torch welding and EutecTodes for arc welding, this issue is illustrated with case histories. Among the products listed is the new line for stainless steel arc welding, which provides quality welds at lowest amperages, without damage to base metal.

These electrodes are known as Eutec-stainrodes and are available for all types of low heat stainless steel welding, depending upon composition of base metal. An unusual item in this new line is Eutec-Stainrod for gas welding only, which is flux coated to insure welds at lowest heat.

A complete selection chart is also included for information on the numerous specialized welding alloys of Eutectic for particular jobs. The eight-page bulletin gives a complete description of more than 100 "Low temperature Welding Alloys" for everyday production and specialized uses, each picture detailing a specific welding operation on a great variety of metals.

To receive a copy of Directory Welder for 1950, write to Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.

Servicemen!

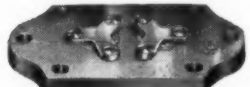
FOR MAXIMUM EFFICIENCY

USE

CHICAGO SEALS AND VALVE PLATES



Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.



Only Chicago valve plates have replaceable seats. Replacements for over 340 compressor models.

CHICAGO SEAL CO.
332 S. HOYNE AVE. CHICAGO 12, ILL.



feelin' fresh as a daisy!

... and kept that way with Ranco "All-Weather" Type O-1559 Controls

Completely automatic defrosting—regardless of weather, load conditions or cold location of the compressor — helps maintain uniform relative humidity with Ranco "All-Weather" Type O-1559 Controls. Adaptable to either natural or forced convection units in walk-in coolers, display cases, florist boxes and similar temperature range fixtures. They keep food and flowers fresher... provide better protection from shrinkage and spoilage.

Ask your Ranco wholesaler to show you the complete line of Ranco Controls — found in more original installations than any other control.



Replace it right with Ranco

Ranco Inc.
COLUMBUS 1, OHIO

World's Largest Manufacturers of Refrigeration Controls... more than 20,000,000 controls now in use

CEILING SPACE NOW PAYS DIVIDENDS



WITH THE FAMOUS

Palmer
GAS FIRED
SUSPENDED
HEATER



Distributors, dealers! Store owners, purchasing agents and architects all agree this is the finest, most efficient unit heater ever produced. Truly "the design of tomorrow."

PALMER is equipped with automatic controls and embodies exclusive high performance features. Customers receive "heating comfort plus" without so much as lifting a finger.

Yes, with a PALMER suspended heater, ceiling space now pays dividends in trouble-free heating efficiency, appearance and economy

Dividend wise, PALMER will pay you too and many fold. Ordering a display stock now will soon prove it! There's a perfect model and size for every heating need. Write for free literature today. Dept. No. N-2.

PALMER MANUFACTURING CORPORATION
manufacturers of the famous Sno-Breze air coolers
PHOENIX, ARIZONA



World Import Restrictions Affecting Air Conditioning & Refrigeration Equipment

(8. Poland Through Sweden)

With this article we present another in the special series of studies on the present-day import regulations pertaining to our industry. This information has been collected from all parts of the world with the active assistance of the U. S. Department of Commerce, Washington, D. C., and its District Office in Detroit. American export figures for the year 1948 will be added. Our readers are advised to retain these articles, as they appear, as a similar publication has, so far, not appeared in the press.

The countries will be treated in alphabetical order. Wherever available, late information—dated June to August, 1949—on developments of imports of the products of this industry from the United States will be added.

By Eugene Hesz, International Market Analyst and Instructor, University of Detroit

POLAND

For exports to Poland, import licenses and exchange permits are needed for every product. On account of the present political situation in Poland, the government of which is practically in Russian hands, our exports to that country are very limited. The products of our industries sent to Poland in 1948 amounted to no more than several hundred dollars. The situation, however, bears watching for several reasons.

In the first place, the political situation may be considered somewhat unstable, in so far as the population is not accepting the Russian yoke without resistance. A development like that in Yugoslavia is not improbable. In the second place, it has been observed that England has managed to get her Polish trade going again and, even if distance and dollar shortage will hamper our efforts, our interest in Polish raw materials (certain metals and minerals) might prove helpful.

PORTUGAL

For exports to Portugal, the Americans need a Portuguese import license and exchange permit. The country has no particular prohibitions regarding any type of air conditioning and refrigeration equipment. From a standpoint of foreign exchange availability Portugal appears to be at the crossroads of American and British trade channels.

A foreign exchange situation allowing greater trade with the United States is hampered by the strong efforts of England to improve hard currency receipts.

According to latest information available (late fall 1949), the great majority of bills on Portugal was paid three to 20 days after presentation. In the year 1948 the exports of our industries amounted to: domestic refrigerators, \$175,000; parts for same, \$7,000; commercial refrigerators, \$51,000; miscellaneous air conditioning and refrigeration equipment, \$95,000; auxiliary equipment, \$49,000; replacement parts, \$7,000; and ice-making equipment, \$3,000. This adds up to a total of \$387,000.

PORTUGUESE COLONIES

These consist mainly of Mozambique in East Africa and Angola in West Africa. Exports to these colonies also need import licenses and exchange permits. The prevailing situation is closely related to that of the mother country, even if the actual export potential of the colonies is stronger than that of Portugal itself. In the official statistics of the United States we find the exports of the products of our industries for these two colonies listed separately (see above).

RUMANIA

This country, situated behind the iron curtain, requires permits for im-

U. S. Exports of Refrigeration and Air Conditioning Equipment to Portuguese Africa In 1948

Products	Angola U. S. Dollars	Mozambique U. S. Dollars
Domestic refrigerators	\$50,000	\$23,000
Domestic refrigerator parts	5,000	4,000
Commercial refrigerators	28,000	15,000
Miscellaneous air conditioning and refrigeration equipment	11,000	40,000
Auxiliary equipment	8,000
Replacement parts	2,000
Totals	\$94,000	\$92,000

ports as well as for exchange purchases for every kind of merchandise. Commerce between the United States and Rumania is at the lowest possible ebb and the outlook appears dim. Our total exports from our industries over the year 1948 were only of a nominal size.

SIAM

This country, also known as Thailand, makes import licenses necessary only for certain luxury items and military equipment. An exchange permit is not needed. The actual condition of foreign trade does not quite correspond to these liberal regulations.

In order to be able to buy one American dollar for only 10 baht (the Siamese currency at the official rate of exchange) the absolute necessity of the imported item must be proven. Otherwise the free rate must be paid. This rate was 20 baht for one U. S. dollar in the fall of 1949.

There are no specific regulations prohibiting the import of commercial or domestic refrigerators, but they fall under such merchandise for which the free exchange rate must be paid.

No recent survey has been made of marketing possibilities for Siam for such durable items as refrigerators. The use of domestic refrigerators is restricted largely to a relatively small segment of the Bangkok population composed chiefly of Westerners and a few wealthy Siamese and Chinese. In 1949 a total of 611 refrigerators of this type was exported from the United States to Siam. It would appear that the Siamese market for commercial refrigerators would be considerably more limited than that for domestic ones.

During 1948 American exports of the different products of our industries amounted to \$87,000 for domestic refrigerators; \$15,000 for parts for domestic units; \$11,000 for commercial refrigerators; \$13,000 for miscellaneous air conditioning and refrigeration equipment; \$5,000 for auxiliary equipment; \$1,000 for assembly parts; \$4,000 for replacement parts; and \$134,000 for ice making equipment. This amounts to a total of \$270,000, embracing all exports from our industries to this country in 1948.

SINGAPORE

This important Asiatic market has been treated under the main heading "Malayan Federation" in part seven of this series.

SPAIN

The situation in Spain remains very difficult for the international businessman. Dollars are scarce and, despite energetic efforts of many well-meaning diplomats who want to show Spain the way back into the family of democratic nations, the improvement to be expected therefrom does not yet seem near at hand.

At present, import licenses are needed for all imports and are limited almost exclusively to essential raw materials. However, there are no specific regulations against importation of refrigeration and air conditioning units.

According to the latest information available in the offices of the Chase National Bank of New York, letters of credit continue to be advisable. Proceeds of some drafts have been cashed of late with a two months delay and dollar exchange continues to be in strong demand.

The procurement of foreign ex-

change in Spain is also subject to special regulations. Exchange to cover import license is obtainable only through the Exchange Institute which usually, but not necessarily, grants it. The government has special exchange rates fixed for many different products.

Our total exports to Spain, concerning the products of our industries, over the entire period of 1948 amounted to \$30,000 for domestic refrigerators; \$6,000 for domestic refrigerator parts; \$3,000 for commercial refrigeration; \$8,000 for miscellaneous air conditioning and refrigeration equipment; \$5,000 for auxiliary equipment; and \$11,000 for replacement parts. This adds up to \$63,000.

SPANISH COLONIES

Import licenses are needed for all imports. The import license carries the right to foreign exchange. The main Spanish colony, Morocco, has been treated under the main heading "Morocco" in part seven of this series. American exports of our industries to other Spanish African territory amounted only to \$5,000 for domestic refrigerators in the entire year of 1948.

SURINAM

This Netherlands colony in South America also carries the name, Dutch Guianas. The climate is oppressively hot and the demand for our products is only limited by the small number of European settlers and the slow development of this difficult region. Since 1940 all imports into Surinam are subject to license requirements and those of most articles to quota restrictions. An exchange permit is also required.

According to the current import regulations, refrigerators are included in a special category for which import licenses are issued on a case-by-case basis. Total exports of our industries in the year 1948 amounted to \$25,000 for domestic refrigerators; \$2,000 for domestic refrigerator parts; \$8,000 for commercial units; \$1,000 for air conditioning units; \$2,000 for auxiliary equipment; and \$1,000 for replacement parts. The total amount was \$39,000.

SWEDEN

Sweden, one of those countries which lost the economic "hinterland" through the effects of the last war, has quickly run out of the dollars earned during the war. Therefore, it will be understood that rigid controls for imports have been imposed and import licenses are necessary in every case.

American exporters can obtain information by writing to the Area Division or one of the field offices of the Department of Commerce. Hard currency exchange to cover import licenses will, as a rule, be made available provided the import license has a special notation to this effect, made either by the Foreign Exchange Office or by the authority which granted the license. Some latitude for exceptions granted under the "general clause" may be expected for certain air conditioning and refrigeration equipment not produced in Sweden. This latter angle is very important as Sweden has a splendidly equipped refrigeration industry (Electrolux, ASER, etc.). According to the New York bank quoted before, the proceeds of bills covering goods imported into Sweden under license were mostly liquidated with little or no delay.

In the year 1948 we exported domestic refrigerators for only \$1,000; but parts for \$46,000. Commercial refrigerators added up to \$115,000; miscellaneous air conditioning and refrigeration equipment to \$96,000; auxiliary equipment to \$26,000; replacement parts to \$22,000; and ice making equipment to \$1,000. Altogether our exports of products of our industries to Sweden amounted for the year 1948 to \$307,000.

(To Be Continued)

Selling Methods Outlined For Big Appliance Market In Belgium, Luxemburg

WASHINGTON, D. C.—The foreign press reports that Belgium and Luxemburg offer "a large and expanding market" for household appliances, according to *Foreign Commerce Weekly*, a publication of the Commerce Department's Office of International Trade.

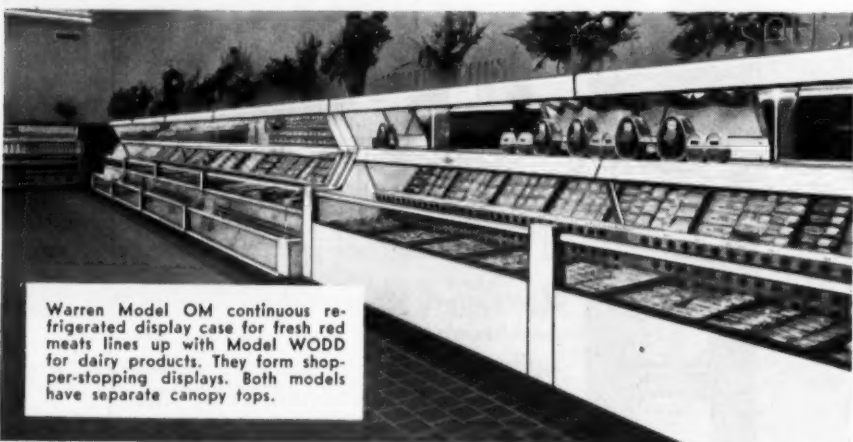
"The standard of living is now on a much higher scale than before the war," the magazine said. "The average housewife has become conscious of the advantages of household appliances."

"Although Belgium and Luxemburg have long since passed the peak of the postwar boom, there is still a large demand for domestic refrigerators of United States manufacture. A good market also exists for washing machines, vacuum cleaners, toasters, mixers, and waffle irons."

"It is definitely a buyers' market, and the average purchaser is primarily interested in price. However, purchasers are prepared to pay a fair price for articles of good quality, appearance, and workmanship."

"Small details in design and efficiency also influence sales. The provision of attractive advertising material is essential; it is preferable that pamphlets and instructions be printed in French and Flemish. The metric system should be used in specifying weights and measures."

"The market in Belgium is highly competitive, the United States and Switzerland leading the field. A revival of German competition on a substantial scale may be expected in the near future."



Warren Model OM continuous refrigerated display case for fresh red meats lines up with Model WODD for dairy products. They form shop-stopping displays. Both models have separate canopy tops.

Warren Refrigerated Displays Selected by Delchamps



More than 240 lineal feet of WARREN perfectly matched display cases have helped make the new

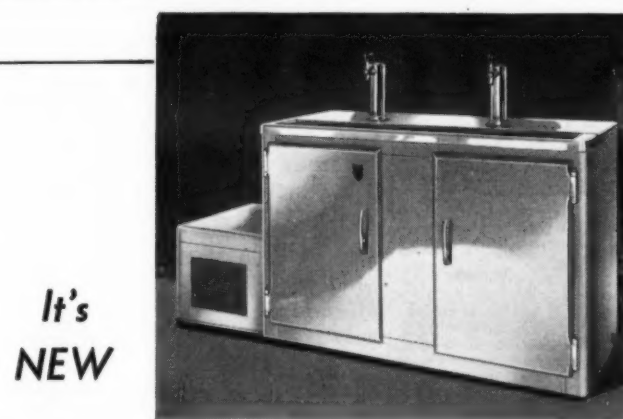
Delchamps, in Mobile, one of the most beautiful food stores in the country. Delchamps' recognition of the efficiency and sales appeal of WARREN cases is one more proof of WARREN'S leadership. Franchises are available in some territories.



THE WARREN COMPANY, Incorporated

P. O. Box 1436

Atlanta 1, Georgia



It's
NEW

It's a
DANDY

The Southern Direct Draw Dispenser!

3 Half Capacity . . . 2 on tap . . . 1 in storage

It's the perfect answer to every beer dispenser's needs! Two halves on tap, plus one in storage—three sets of tapping equipment included. Complete with those important Air Cooled Faucet Standards!

Gleaming stainless steel inside and out (also available in black high baked enamel), with semi-concealed hardware—heavy insulation—removable drains—nickel plated brass fittings and every improvement and refinement. Write for Bulletin No. 61.

Perlick
BRASS CO.
Milwaukee 10, Wis.



Study of Produce Display Increases Retailer Sales

Gov't Training Course Aids Grocers In Merchandising

WASHINGTON, D. C.—Training classes for retailers of fresh fruits and vegetables, conducted under authority of the Research and Marketing Act, have resulted in increased sales for 96% and reduced spoilage for 95% of the stores reporting results to the Fruit and Vegetable Branch of the Production and Marketing Administration, U. S. Department of Agriculture. More than 14,000 persons, including retailers and their employees, have taken the training, and additional classes are being instituted in numerous cities.

Reports from 1,881 retail stores, each of which sent one or more persons to the training classes during the first year of their operation, were used as the basis for evaluating the program.

Classes are conducted by the United Fresh Fruit & Vegetable Association under contract with the Department of Agriculture. Retailers are taught methods of preparing fresh fruits and vegetables for sale, methods of display, care of the produce both during the day and over night, efficient handling techniques, and other practices that improve their merchandising and present better products to consumers.

Of 11 important principles or practices taught in the classes, those most widely adopted by trainees were: Improved trimming of vegetables, by 98% of those who had not previously followed the recommended practices; planned color contrast in displays, 89%; and recommended practices in watering produce on display, 87%. Six other practices were adopted by 60 to 70%; and only two were adopted by less than 50%.

As a result of the training, more than 45% of the reporting retailers said they had renovated or were remodeling their produce departments. The changes ranged from minor improvements to remodeling of the entire store. About 43% of those reporting such changes said they were adding new display racks equipped with drains, 16% reported remodeling their present racks, and 8% installed refrigerated racks.

Retailers who took the training course were asked to make suggestions for its improvement. Leading suggestions were that the course be repeated in each location once a year, as a refresher and for new trainees, and that growers and shippers be invited to attend the classes; and that the course be lengthened with more time spent on each phase.

The course now consists of one day of intensive training, during which the trainees are shown recommended methods, and also actually trim and handle the produce themselves and build displays so that they learn by doing. In addition, trainees receive some instruction in buying, pricing, and record keeping.

Copies of a detailed report on the training course may be obtained from the Information Branch of PMA, U. S. Department of Agriculture, Washington, D. C.

High-Voltage Cathode Ray Machine Shows Major Role of Bacteria In Food Spoilage

M. I. T. Experiments Cover Haddock Storage Temperatures

CHICAGO—Broad new possibilities for investigation of the exact causes of food spoilage are seen in the use of a super-voltage cathode ray machine which can kill either bacteria or enzymes without destroying the other.

Heretofore it has been impossible to inactivate satisfactorily the one without affecting the function of the other, thus complicating the studies of food spoilage.

But the new method aroused great interest among food technologists when it was described before the forty-fifth annual meeting of the American Society of Refrigerating Engineers by Prof. B. E. Proctor, head of the Department of Food Technology at Massachusetts Institute of Technology.

Along with J. T. R. Nickerson and S. A. Goldblith, Prof. Proctor had prepared a paper entitled "Effects of Refrigerated Storage at Various Temperatures on the Chemical and Bacterial Content of Haddock."

This described results of studies made on the short-term storage of haddock after exposure to the super-voltage cathode rays of the machine that is being employed primarily in cancer research.

Earlier this year Prof. Proctor described similar studies with mackerel, and he indicated that several other research projects are under way or contemplated.

"The machine," he explained, "operates at 3,000,000 volts and sterilizes or kills the bacteria in a matter of seconds or fraction of a second with an increase in temperature of only 1° F."

"The depth of sterilization is slightly less than 1 in. over a 4-in. area, but we have a belt to feed material under the rays so a large area can be exposed. . . . The haddock fillets received an exposure equal to 1.5 million Roentgen Equivalent."

In the tests run on the haddock, the fillets were sealed in polyethylene tubes, both sterilized and unsterilized fillets being used. The haddock was received at the laboratory not more than 16 hours after the catch and had been stored in ice, Prof. Proctor said.

Chief result of these particular tests, he declared, was the conclusion that "level of storage temperature is

the primary factor in the spoilage of haddock fillet.

"Role played by the enzymes in the deterioration of haddock was negligible, at least over the 14-day period of the test. When bacteria was inactivated by irradiation of the haddock, there was no change."

Examination of the untreated haddock fillets, which had been kept at three different temperatures (50°, 40°, and 32° F.) showed increases in both the bacterial content and content of trimethylamine nitrogen, indicated Prof. Proctor.

"In those fillets which had been inactivated there were no significant changes at any storage temperature, which indicates that bacteria are the chief factor in spoilage," he declared.

It was also brought out by Prof. Proctor, and further emphasized in the comments of Dr. Mary Pennington, that the current practice of commercial fisheries in immediately filleting the haddock is probably not the best procedure.

"Contrary to the viewpoint of commercial fisheries, breakdown of haddock does not occur until the intestine walls break," she said.

Filleting immediately after the catch can actually lead to more rapid deterioration, it was indicated.

"It would be better, I think, for the fishing fleets to pack the haddock in ice in the round rather than fillet them and throw away the entrails," suggested Prof. Proctor.

Empty Cartons Help Dealer Sell Frozen Food Cases

Trenton Refrigeration finds that by filling up a new frozen food dispenser with empty cartons, prospect has better idea what case will look like, is thus more inclined to buy.



Cabinet Rolls on Wheels To Illustrate Position

TRENTON, N. J.—Trenton Refrigeration Co. has found it very profitable to pick up frozen food cartons from various markets in the city and put them in the individual compartments of some of the frozen food dispensers that they sell.

"Rather than just show a frozen food case to a customer and let him picture for himself how it looks," explained manager John Metzler, "we decided to place empty cartons behind the glass windows so that they have a better idea of the final appearance."

A case has been placed on a dolly so that it can be wheeled around the store. In this way, customers can picture it in a location similar to one in their own store.

King, Partner In Air Cooling Firm, Killed In Truck Crash

GREENVILLE, S. C.—Warren N. King, manager and a partner in Texwood, a wholesale air conditioning and refrigeration firm here, was instantly killed the morning of Dec. 7 when the pick-up truck he was driving on the Geer highway near Cleveland, S. C. went out of control.

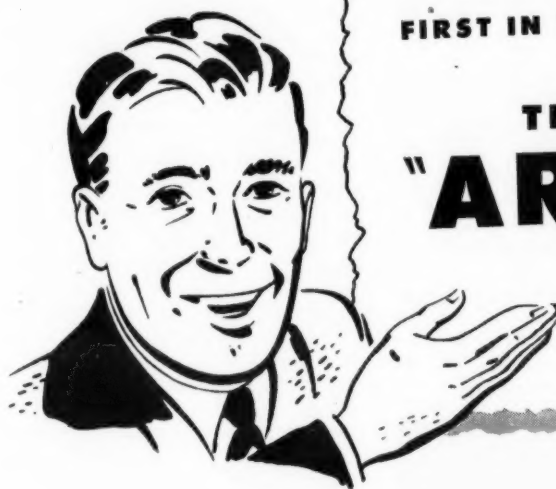
He was born in Worcester, Mass. in 1888 and was a mechanical engineer by profession. He was with the Draper Corp. for eight years, with the U. S. Steel Corp. for three years; and with the Shambow Shuttle Co. for three years.

He then became superintendent, purchasing agent, and manager of the Carolina Wood Turning Co. and more recently operated Texwood.

FIRST IN THE HEARTS OF INSTALLATION MEN

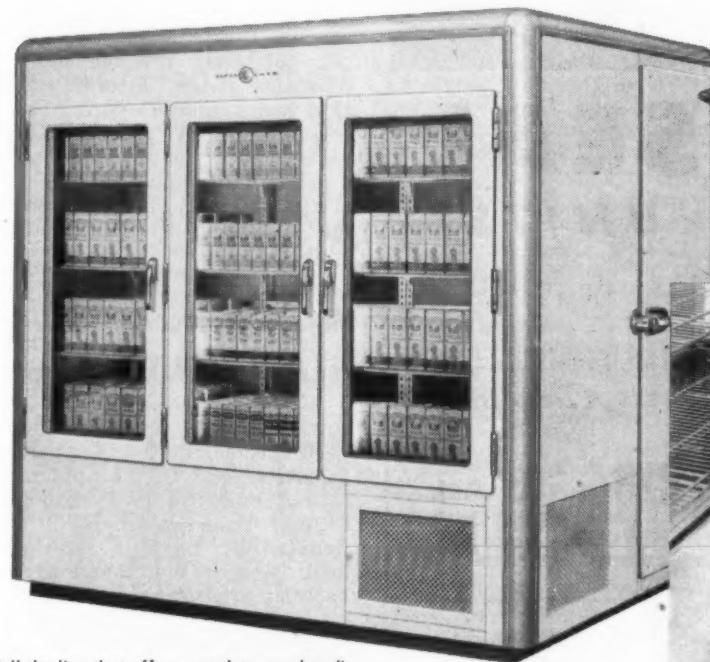
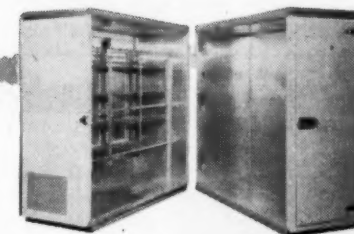
THE New SUPER-COLD "ARISTOCRAT"

COMBINATION WALK-IN REACH-IN REFRIGERATOR



SECTIONALIZED FOR EASY LOW COST INSTALLATION

AND SHIPMENT. The sectionalized "Aristocrat" eliminates costly installation of conventional walk-in coolers. The two complete sections are handled with the ease of a single reach-in type refrigerator and will pass through any standard 38" door opening. The two sections are placed together on the job, eight connecting bolts tightened, and refrigerator is completely installed in a matter of minutes. The "Aristocrat" is another Super-Cold packaged unit. Refrigeration is completely installed at the factory. No cooling coils to hang, no condensing units to locate, no refrigeration lines to install. It is an installation man's dream come true, and a profit-wise item for you.



INTERIOR: Walls and ceilings are aluminum. Floor is kiln dried fir, sealed and lacquered. Vertical fluorescent lights encased in vapor-proof lucite. Adjustable double strength flat wire shelving.

EXTERIOR: Bonderized steel finished in white dulux, trimmed in stainless steel with aluminum corner trim. Display doors of non-sweating, triple plate glass.



Sell the line that offers complete merchandising, from a firm that can give sales training and merchandise techniques gained in 25 years of successful retailing as well as manufacturing and distributing experience. Super-Cold allows you high profit, with advertising sales material support and cooperative assistance to make your job easier on one of the most liberal franchises available. You'll be way ahead with Super-Cold. Get facts now!

THE SUPER-COLD CORP.

1020 East 59th Street • Los Angeles 54, California
New York, Newark, Bridgeport, Dallas, Houston, Oklahoma City, Portland, Chicago, Philadelphia, New Orleans, Tulsa, Abilene, Albany, San Diego, Indianapolis . . . and All Principal Cities
Cable Address: "Supercold"

Spencer Thermostat Appoints 4 to Executive, Field Posts

ATTLEBORO, Mass.—The Spencer Thermostat division of Metals & Controls Corp. here has announced that E. P. Jastram, Jr., formerly a field engineer in the division's St. Louis branch, has been appointed chief engineer.

The organization also revealed that C. A. Peterson, formerly of the headquarters sales force, took over Jastram's duties in St. Louis. B. O. Haun, Jr., who has specialized in refrigeration sales, takes over a newly formed territory with headquarters in Dayton, Ohio.

Jerry Ottmar has assumed the duties of sales promotion manager for the division in addition to his other duties of managing the automotive and aircraft sections.

2 Wyoming Appliance Firms Apply for Charters

CHEYENNE, Wyo. — Two firms dealing in home appliances have just applied for Wyoming charters.

Incorporation papers filed with the secretary of state by the M. Electric Co. of Worland list \$10,000 shares of no par value stock and name John T. Masfield, Thomas W. Mitchell, Jr., Wenona B. Mitchell, and Margaret E. Masfield as directors.

Papers filed by the L. P. Gas & Appliance Co. of Billings, Mont., named Mike G. Brandt of Basin as its Wyoming resident agent.

Miller Electric Sells Crosley

TUSCALOOSA, Ala. — Foster Miller, owner and general manager of Miller Electric Co., 716-18 22nd Ave., has announced that his firm has acquired the Crosley line of appliances.

Available from 1/2 to 10 H.P.

CLEANABLE DOUBLE-TUBE COUNTER-FLOW WATER-COOLED CONDENSERS

Write for literature

Halstead & Mitchell
BESSEMER BLDG.
PITTSBURGH 22, PA.

MOTOR-BASE ADAPTERS

A set of Motor adapters makes that new motor sale possible The adapters do the trick.

1/2 to 1/2 hp.—101-D
1/2 to 3/4 hp.—102-C
1 to 3 hp.—103-C

SERVICEMEN SEE YOUR JOBBER

Motor Adapter Corporation
4730 JOY ROAD
DETROIT 4, MICHIGAN

GUARDIAN OF Flavor Appearance Purity

SUPER-COLD Refrigeration

COMPLETE FOOD STORE REFRIGERATION UNDER ONE GREAT NAME

THE SUPER-COLD CORPORATION
1020 East 59th Street, Los Angeles 54, Calif.

Please send me information about the new Super-Cold display cases and the new liberal Super-Cold franchise.

Name _____
Address _____
City _____ State _____

Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

First Steps In Getting a Patent

Quite often we get letters from readers asking for help with some of their problems. Sometimes we get letters offering additional information on some of the matters covered by the articles, and occasionally we get letters disagreeing with some of our statements. We try to answer all of these letters as time permits. Like most people, we like to get letters, but sometimes shirk writing them.

As might be expected, these letters vary a great deal as to the subjects. Mostly they are on purely service subjects; sometimes on the business phase of service work or contracting. As a rule the letters are very interesting; but in any event they show that someone at least is reading these articles, and that is heartening.

It is not uncommon to receive letters from readers who have conceived some new design of compressor, tool, ice-cube tray, or other device, that they believe they should patent, and they want advice on what course to pursue in order to get a patent and thus protect their invention. Their concern is understandable, for fortunes have been made on some idea that seems so simple that the first reaction is "Now why didn't someone think of that a long time ago?"

PROTECTION WITHOUT A PATENT

Certainly we are no authority on patent law, but we are informed by those who have had much experience in these matters, that it is not necessary to get a patent to protect one's invention—that is, not in the early stages at least.

In fact, it is the policy of some

companies to defer having a patent granted on their inventions for several years from the date of their first application. They are amply protected from the date of application of the patent (and even before that) until the time the patent is granted and issued by the U. S. Patent Office.

The life of a patent is 17 years from the date of issuance by the Patent Office, not from the date it was applied for. So the longer the period between application and issuance, the longer the manufacturer is able to enjoy sole rights to his invention.

If you have an idea that you feel is of value, get it on paper just as soon as you possibly can. Make a sketch of it, showing two or three views of the device, and if possible, sketches of some of the main parts.

Show it as clearly and as simply as possible, preferably in ink, and on vellum or other translucent paper so that you can make blueprints from it. Preferably on this same sheet of paper, write or better, type a brief but complete description of what the device is to do, in what way it is an advantage, and a simple explanation of how the device is constructed and how it works.

HAVE YOUR SIGNATURE AND DATE WITNESSED

In the presence of a witness, sign and date this paper and have the witness also sign and date it. The witness can be almost anyone, but preferably not a close relative, and the witness should be someone whom you expect to be able to get in touch with even several years hence, and one who has a good reputation and standing in the community.

He does not necessarily need to know much about the device; he is merely a witness that as of that date you drew the design and wrote the description. He can verify the date of your original conception of the

idea. Do not make any changes to that paper after he has witnessed it. If you change the design, redraw it and redescribe it, mentioning if you wish, in what way it differs from, and is an improvement over the former design.

Sign and date this paper in the presence of a witness, the same as before and have him also sign and date it. The dates must be the same, or the later date governs. The witness may or may not be the same one as before.

You are now amply protected temporarily. Your next step should be to build a model, if your invention is of such a nature that it is feasible to build a model. The model does not have to be full size, but should be so made that it demonstrates how the device works and what it does. If and when you make changes in your design, redraw them and describe them; sign and have witnessed as before.

If you wish to show your model or drawings to someone, such as a manufacturer or a prospective buyer of the rights to your invention, have two blueprints made of your drawing; have him sign both of them and date them, with the words "Received in confidence." He has thus acknowledged that it is your design and that you have disclosed it to him in confidence for some purpose of discussion. You keep one of these blueprints, and he can keep the other. You are amply protected against his using your design.

PATENT APPLICATION COMES LATER

You may find that the device has no market value, or that you overlooked some important factor and that in fact the device will not work as you expected, or at all. It may cost more to build than it could be sold for. There may be something on the market that does the same thing better or that can be built for more cheaply. If for any reason it does not appear advisable to go ahead with making or selling the device, you are not out the cost of having a search made to see if it is patentable, making application and getting a patent issued—if in fact it is found patentable.

A "good idea" is not necessarily patentable; your design may be in what is called "Prior art," that is, it was used years ago and is common property; it may infringe on someone else's current patent; it may be like a German or Italian patent that was taken over by the United States and is available for anyone to use.

To get into these matters, you will need a good patent attorney. Ask your attorney for the name of a reputable patent attorney; or most any large manufacturer can refer you to one. A patent attorney is necessary if you find that you have a device that should be patented; but you can amply protect yourself in the early stages by the methods described above.

Morgan Heads Appliance Sales For Upstate N. Y. Distributor

ALBANY, N. Y.—Ned Morgan has been promoted to the position of sales manager in the appliance division of Fort Orange Distributing Co., 642-644 Broadway here, it was announced by David L. Marks, president. Morgan will direct a company expansion program.

MARSH

Pressure Gauges
Dial Thermometers

*The gauge with the
Recalibrator

Ask for this New
Refrigeration Booklet

JAS. P. MARSH CORP.
DEPT. D., SKOKIE, ILLINOIS

SAFETY: These Precautions Stressed In Handling Service Work

ATLANTIC CITY, N. J.—Emphasizing his safety pointers with a series of cartoon slides, George J. Schuld, Sr., chairman of the safety committee of the International Refrigeration Service Engineers Society, recently reminded members once again of the many safety precautions they should take but often ignore in the rush of getting a job done.

Speaking at the 12th annual convention of the society, Schuld made these points:

Never hang a lighted torch on top of Prest-O-Lite "B" tank. The heat may blow the fusible plug and cause a fire.

Abandoned refrigerators are death traps for children. Ten children have been found suffocated in such boxes in Ohio in less than two years. Always remove the hinges or latches or nail the doors shut.

Don't use an open flame torch on a gas drum to add gas. Heat will cause the gas to expand and might explode the tank.

Don't purge refrigerant in a poorly ventilated room. Non-toxic refrigerants are hard on a person's health after a number of exposures.

Keep open flames away from methyl chloride. The insurance rates for refrigeration servicemen are nearly equal those for miners.

Wear goggles and keep guards on grinders. Flying chips can cause serious eye injuries.

Never store a charged condensing unit in a basement. In case of fire, the unit might explode. Units should be discharged before storage, for old units have a tendency to develop leaks.

In case of a leaking flare connection, the system should always be pumped down before attempting to tighten the flare nut.

Always use proper gauges.

Don't wear a four-in-hand tie near a fan or belt. It can always catch and the sudden jerk can break one's neck.

Never use gasoline for cleaning compressors. Use non-inflammable cleaners.

Don't carry heavy loads by yourself.

Don't work around moving machinery with gloves on. Gloves can get caught before you realize it and lead to injury to your fingers.

Don't use extra large screwdrivers. They are prone to slip and can injure one's hand.

Don't oil oxygen tank connections. Never let oil or grease come in contact with the gas.

Keep tools and equipment off the stairs and in one safe place—the tool kit.

Cutting torches are dangerous. Improperly used they can set a building on fire. (He illustrated this point with a cartoon showing a serviceman cutting through a wall. On the other side of the wall was piled boxes of high explosives.)

Don't stand in water when handling electrical motors or changing fuses.

Don't purge SO₂ with a hose where flowers or shrubbery will be exposed to the gas. The gas has a killing effect on them.

Don't make "temporary installations." Always do a job right the first time. There is nothing more permanent than a "temporary" installation.

The beryllium in fluorescent lamps can be toxic, so use care in disposing of them.

Never stay in a confined space where a safety lamp won't burn. This indicates there is not enough oxygen in the air for human survival. If you must go into such areas use respiratory masks.

The best way to remove chemicals spilled on the skin is to use plenty of water. (There are a few exceptions to this.)

Watch cords on portable electric drills. Remember, 110 volts can kill, and they can cause serious accidents.

4 Elected Vice Presidents Of Walker Martin, Inc.

RALEIGH, N. C.—R. W. Martin, president and majority stockholder of Walker Martin, Inc., General Electric appliance distributor for North Carolina, has announced the election of four vice presidents in his firm.

All stock in the company is now held by its officers and employees, he stated.

Martin said the new vice presidents are: E. H. Peabody, of Greensboro, manager of the Greensboro area; J. Y. Parker, of Raleigh; Oliver Crawley, advertising manager, Raleigh; and J. C. Peterson, manager of the Charlotte distributing area.

Directors of the firm, in addition to Martin, include E. L. Jenkins and J. Y. Parker, of Raleigh.

Stevens Furniture Co. Adds Frigidaire Appliance Line

ACWORTH, Ga.—The Frigidaire line of major appliances has been added by Stevens Furniture Co. here, according to Sam Peppers, who recently purchased the local firm.

Peppers said two regular route salesmen will devote their full time to appliance sales.

SHANK DEHYDRATORS COST LESS THAN REFILL LABOR!

Check your labor cost on refilling with the cost of new Shank Dehydrators—you'll find they cost no more . . . and you eliminate the trouble of refilling.

SHANK DEHYDRATORS
Precision constructed to give long service. Only fresh dust-free silica used—won't powder.

Keep a supply of Shank Dehydrators on hand—write for prices or see your jobber.

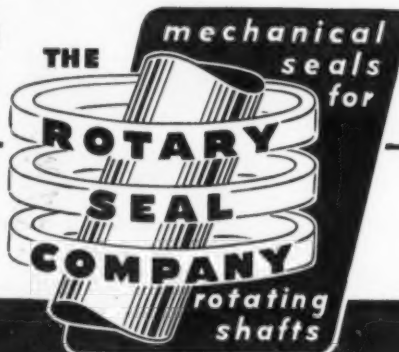
CYRUS SHANK COMPANY
631 W. Jackson Blvd., Chicago 6, Ill.



ROTARY SEAL REPLACEMENT UNITS

✓ Simple in Construction ✓ Easy to install
✓ Efficient in operation ✓ Economical . . . you get all these important features in 18 years of time-tested, performance-proved ROTARY SEALS . . . A complete line of sizes.

MORE THAN
848
MODELS



AT ALL
LEADING
JOBBERs

"Seal with

Certainty!"

2020 NORTH LARRABEE STREET
CHICAGO 14, ILLINOIS, U.S.A.
CANADIAN AGENT: 2025 ADDINGTON AVENUE
MONTREAL 28, QUEBEC, CANADA

Here's Your New HARRY ALTER'S DEPENDABOOK! NO. 151



Bargains! BARGAINS!

Page after page of bargains in refrigeration parts and supplies—some 60% below standard prices. Everything guaranteed as described—money-back guarantee . . . 2% discount for cash . . . Get the new DEPENDABOOK and stock up. Buy your WHOLESALE ONLY 1950 needs NOW!



"Service Doesn't Falter When It Comes From Harry Alter"

THE HARRY ALTER CO.
1728 SOUTH MICHIGAN AVENUE, CHICAGO 16, ILLINOIS

REFRIGERATION PARTS CATALOG

134 LaFayette Street
New York 13, N.Y.

What Happened In the Industry

As Reported In Air Conditioning &
Refrigeration News

20 YEARS AGO . . .

Servel, Inc. announced that it was reducing prices and lengthening discounts for the coming year. . . . ASRE celebrated its 25th anniversary in New York City.

"Don't worry a woman about how the wheels go round," said V. E. Vining in a discussion of retail selling, "but demonstrate how your cabinet will fit into her kitchen operations. What she wants to know is where and how she is going to save time, trouble, food, and money—not how many B.t.u. there are or how many times the wheels go round."

Copeland Products, Inc. moved its production to a new plant in Mt. Clemens, Mich.

. . . People

E. R. Legg was appointed manager of the eastern district of Kelvinator Corp.'s ice cream cabinet division. . . . Frank R. West resigned as engineer for Copeland Products, Inc. to engage in private research.

Vice President H. M. Stewart of McCray Refrigerator Sales Corp. was appointed general manager of the company. . . . ASRE elected Harry D. Edwards president for 1950.

15 Years Ago . . .

Kinetic Chemicals, Inc. reduced the price of "Freon" by 10 cents per lb. . . . Stewart-Warner Corp. announced its new heavy-duty one-cylinder compressor. Revolving shelves for use in an electric refrigerator were developed by Chas. E. Passmore, a refrigeration engineer. Production of 57,980 household refrigerators was reported by Néma for October.

. . . People

Willis H. Carrier, chairman of the board of Carrier Engineering Corp., was chosen to receive the American Society of Mechanical Engineers' 1934 medal for distinguished service in engineering and science.

L. D. O'Connell was appointed manager of air conditioning by Westinghouse Electric & Mfg. Co. . . . W. M. DeWitt was placed in charge of Kelvinator Corp.'s domestic advertising.

Howard E. Blood, president of Norge Corp., predicted that 1935 refrigerator volume would be 26% ahead of 1934, a record year. . . . Clyde E. Ploeger was appointed chief engineer of the commercial refrigeration division of Servel, Inc.

M. W. Knight, for several years commercial sales manager of the Chicago branch office of Servel, Inc., was appointed manager of the Detroit branch of General Refrigeration Sales Co., manufacturer of Lipman equipment.

10 Years Ago . . .

McQuay, Inc. announced a combination locker room cooling unit and a sharp freezer cabinet, known as the "Zero Pak" system. . . . Therm-O-Rite Products Syndicate was formed in Buffalo to market temperature control units in induce "frozen sleep" in the treatment of cancer.

Minneapolis-Honeywell Co. introduced its "Modutron" system, which provided a simple arrangement for securing the proper modulation of the liquid flow to give best comfort results from the point of view of both temperature and relative humidity.

Under pressure from FTC, Morris E. Beitman, trading as Supreme Publications, Chicago, agreed to discontinue representing his pamphlets on air conditioning as a "complete course." He also agreed to cease stating that "It's no trick to obtain work in air conditioning, the field with more jobs than available trained men."

. . . People

G. T. Dunklin, assistant sales manager of Westinghouse merchandising division, was named to head newly created department on installment financing. . . . R. R. Ludington was appointed assistant domestic appliance sales manager for Universal Cooler Corp.

L. B. (Pat) Miller joined automatic controls division of Perfex Corp.

G-E Outlines '50 Commercial Promotion--

(Concluded from Page 1, Column 5)
as are now being produced. However, some innovations are being made.

During the period devoted to discussions of sales plans for 1950, L. E. Thompson, manager of parts sales and product service, announced that the number of condensing units in the line will be reduced, "with each unit covering a wider application range than ever before," and that the department is "coming out in 1950 with standard speeds."

He said a few more changes have been made and will be announced during the field meetings which will start in January.

Thompson's talk included a progress report on the parts-depot program which has been in effect about a year. He reported that depots have now been established in more than 70 cities and that a few more will be set up to take care of the remaining areas where representation is needed.

Thompson described the program as "successful and sound." The department intends to keep on developing it, he stated.

He also revealed that in 1950, "G-E is going to give you its hermetically-sealed condensing unit for sale over the counter. You are getting your chance to get your foot inside the door of the entire replacement market. Parts depots will have G-E sealed machines to sell on exactly the same basis as open-type machines."

NO MAJOR CHANGES IN A.C.

Sales plans for air conditioning equipment and water coolers were detailed by H. N. McMenimen, Jr., manager of distribution sales. He said no major changes were being made in either line, but noted that the 5, 10, and 20-gal. bubbler coolers will be available with stainless steel tops.

The air conditioning line includes 2, 3, 5, 7½, and 10-ton packaged units, the HD central plant equipment, and the AD-DX models. McMenimen, commented that while G-E has no room cooler, "the AD-DX is a perfect answer to small-scale room air conditioning."

"Our remote room air conditioner hooked up in a direct expansion system is a real room air conditioner that performs all the functions of legitimate, dependable air conditioning," he asserted, adding that a new AD unit will be announced in January.

PACKAGED UNIT SALES UP 45%

He said sales of G-E packaged air conditioners through November had increased 45%, compared with last year.

In discussing the department's plans for promoting the sale of air conditioning products, McMenimen recalled that "at last year's 'Shirt Sleeves' meetings, we talked about selling air conditioning a new way."

"Merchandise it," we said. 'Sell the package, not the parts' . . .

"Since that time, we've run tests—actual field tests. We've talked to many of you who have posted good sales records. We've studied and analyzed and we know now, more than ever, that to sell air conditioning, you've got to take more engineering out of your selling and put more peddling into it."

"Don't talk B.t.u.'s and c.f.m.'s; talk about comfort, benefits, and increased business benefits."

The present low saturation of air conditioning, he declared, "means that the market is just as big as you want to make it. It means that this is a good, healthy business, and that profits and sales will be limited only by the aggressiveness with which we go after prospects."

"With a market as huge as this, our problem is not finding markets but developing them. In line with this philosophy of developing markets, we have during the past few months begun to test and develop certain geographic and specialized markets."

"We are going to work in cooperation with you . . . during 1950 to develop your local markets and to develop special markets throughout the country."

UTILITIES HELP SOFTEN MARKET

He called attention to the fact that many electric utilities are now preparing to actively promote air conditioning to the commercial market.

"They'll help soften the market for you," he stressed. "Be sure your salesmen and dealers cash in on this opportunity."

Another example of the way the

department is going to develop special markets in 1950, he disclosed, "is a possible project in conjunction with supermarket air conditioning." He pointed out that supermarkets have become a leading source of air conditioning sales.

TO PROMOTE OFF SEASON SELLING

In addition, he said, "We are going to work toward promoting the market for pre-season selling and off-season selling. And we are going to cooperate with utility companies for special air conditioning projects."

Continuing, McMenimen reported that field tests made by a special group of G-E Air Conditioning Department headquarters men last summer in cooperation with field men resulted in these recommendations, among others:

"1. Cover only similar types of prospects in a small area at one time so you don't have to change your sales story too much in one day."

"2. The best selling ammunition you have aside from your product is a good case history, an old-fashioned testimonial, preferably from a business of the same type."

"3. Show your prospect how air conditioning pays for itself."

To illustrate what can be done through planned, aggressive selling, McMenimen cited the accomplishments of one G-E distributor, Earle Smith of Homemaker Sales in Westfield, N. J., whom he interviewed on the stage at this point.

SELLS 60% OF MARKET POTENTIAL

It was brought out that in an area covering only four communities (Westfield, Plainfield, Summit, and Rahway), with a total population of 137,000, Smith's firm has sold 48 G-E store coolers since May. This was said to represent 60 to 70% of the potential in that area.

It was further pointed out that the total air conditioning installed in the district in the last 18 months was 375 tons. Of this, the firm was credited with selling and installing 305 tons. This record was reportedly made despite the "limited resources and personnel" of the company.

McMenimen concluded by emphasizing that the air conditioning and water cooler lines would be backed by improved and expanded advertising, sales promotion, and sales training programs to be revealed during the forthcoming regional meetings.

Plans regarding the heating lines were outlined by H. J. Wines, manager of sales, automatic heating division. In telling of these plans, he said that changes made at the factory will permit quadrupling of the output of "Air-Wall" heating units.

J. D. Hoffman, manager of direct sales, spoke on product service as a selling tool, winding up this part of the meeting.

H. B. Donley, manager of marketing, acted as chairman of the meeting. After his opening remarks, he introduced Smiddy, who made the keynote address.

Smiddy reviewed the 10 elements of G-E policy presented at the last conference and then compared them with the results obtained during the year. He concluded that the building of a stronger distribution is a basic "must" this year.

He then answered a number of questions on departmental policies that had been posed by the distributors, noting among other things that the company's discount structure is now being reviewed. Also, he discussed on the value of the G-E franchise.

MERCHANDISING WILL MOVE 25% MORE

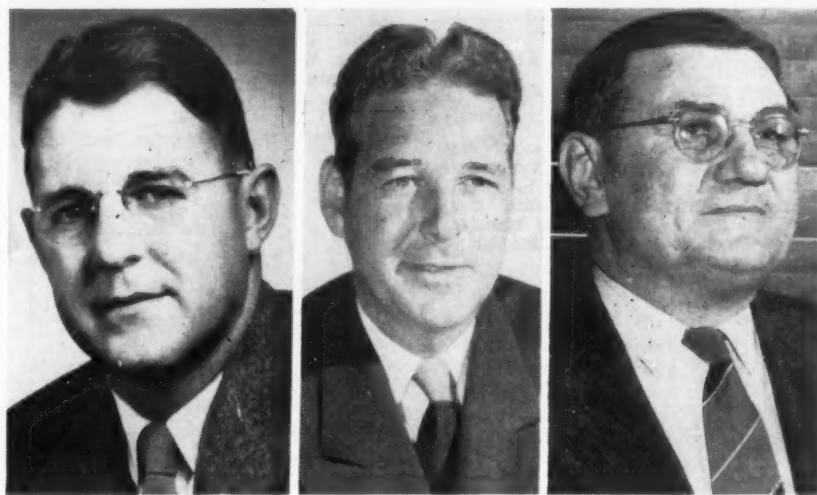
Smiddy predicted at the meeting that a 25% increase in the sales of air conditioning and automatic heating equipment for both industry and the home can be achieved in 1950 by aggressive merchandising plans now being effected by the industry.

"Public acceptance of air conditioning products reached a new high during the past year," he said. "Yet, less than 10% of the potential market has been sold. The time has now come when good, aggressive selling can increase industry sales by at least 25% in the coming year."

He said he based his statement on four factors: improved products, greater public acceptance, plans for a better selling job, and revived promotion of air conditioning equipment by electric utilities in many parts of the nation.

Another important trend in the business, he observed, is "toward the

In Top Posts at Ansul Chemical Co.



R. C. HOOD
President

L. C. MCKESSON
Vice pres., sales

A. C. POPE
Vice pres., mfg.

New Ansul Officers--

(Concluded from Page 1, Column 4)

He was promoted to vice president in 1948. And now, at the age of 32, he has become one of the chemical industry's youngest chief executives.

McKesson, one of the new vice presidents, is scheduled to be the next director of the All-Industry Air Conditioning and Refrigeration Exposition. He has been with Ansul 22 years, serving as traffic manager, sales manager, sales director, and now vice president.

Pope has spent 16 years as production manager of Ansul's sulfur dioxide and methyl chloride plants. He is a recognized authority on the production and handling of these two chemicals.

Other executives at Ansul include H. V. Higley, chairman of the board; H. C. Higley, secretary; and S. R. Helmquist, treasurer.

Minute Maid Extends Truck Delivery System To New England States

NEW YORK CITY—Minute Maid Corp., which a short time ago adopted a direct truck distribution system in the New York City area for its frozen orange juice, has extended the system to the New England states, Howard C. Boerner, national sales manager for the firm, announced recently.

The system is similar to that of milk delivery routes used by dairies. Boerner asserted that the adoption of this system in New York City resulted in a 40% increase in sales. He said:

"Under this new plan for distributing frozen juice concentrate, each of 60 trucks, operating in this area, carry sufficient supplies for driver-salesmen to fill orders immediately. These trucks service about 10,000 retail grocers here and the time saving and added convenience of the operation have combined to make it highly successful."

Boerner indicated that the company has also been successful in expanding the sale of its product by offering the retailer a special frozen fruit juice merchandising cabinet on a rental-purchase plan.

He said that the cabinets are available for \$5 per month which is applied to the total cost of \$150. He noted that more than 1,000 local grocers have placed orders for these cabinets.

The low payment plan for purchase and the fact that the cabinet does not take up much floor space to sell a highly profitable item accounts for the great popularity of the unit, he averred.

Only the orange juice concentrate is merchandised on the truck distribution plan, according to Boerner. He said the company has no plans to extend the idea to other frozen products.

Boerner estimated that frozen orange juice accounted for 35% of the volume of frozen fruit juice concentrates sold on the east coast and for 50% of the dollar volume.

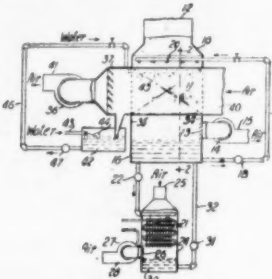
Dalco Appliance Stocks Maintained at Fresno

FRESNO, Calif.—Stocks of Dalco Appliance Co., a subsidiary of the Dallman Co., will be maintained at the new Dallman branch recently opened at 414 P St. here, the company announced recently.

PATENTS

Week of August 23
(Continued)

2,479,936. AIR CONDITIONING APPARATUS. Gilbert A. Kelley, Toledo, Ohio, assignor to Surface Combustion Corp., Toledo, Ohio, a corporation of Ohio. Application Dec. 21, 1946, Serial No. 717,664. 2 Claims. (Cl. 62-139.)



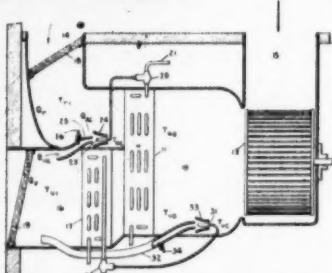
1. Apparatus for conditioning air by use of a hygroscopic solution comprising, in combination, means for producing a current of the air to be conditioned, a casing having a zone through which the air flows, a source of supply of said hygroscopic solution, a plurality of laterally spaced bodies collectively forming in said zone an extended contact surface for said air and solution, means for wetting said contact surface with running films of said solution, each of said bodies comprising a relatively tall and laterally narrow tunnel which traverses said casing from side to side and thereby provides a closed passageway through said zone crosswise thereof, means for wetting the inside surface of the several tunnels with running films of water, and means for producing a current of air through said tunnels to abstract heat from the running films of water by partial evaporation thereof whereby the films of water are maintained sufficiently cool to absorb heat from the films of hygroscopic solution through the walls of the tunnels.

2,480,082. METHOD OF PACKAGING FOODS TO BE FROZEN. Robert D. Lowry and Carroll E. Irons, Midland, Mich., assignors to The Dow Chemical Co., Midland, Mich.



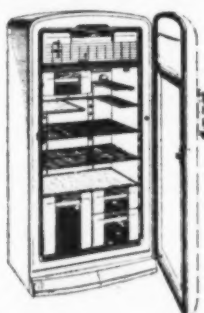
1. The method which comprises placing a food article of irregular contour in a water-tight, thin-walled flexible bag, covering the article in the bag with water so as to displace air pockets from in and around the article, closing the bag below the water level, inverting the bag, releasing water slowly through the constricted neck of the bag without admitting air thereto, to draw the bag closely into contact with as much as possible of the outer surface of the enclosed article, closing the neck of the bag to retain the article and sufficient water to fill cavities and surface irregularities thereof, and freezing the resulting packed article.

2,480,098. THERMOSTATIC MODULATING SYSTEM. Albert B. Hubbard, Caldwell, N. J., assignor to General Electric Co., a corporation of New York. Application July 24, 1946, Serial No. 685,949. 4 Claims. (Cl. 236-37.)



1. A heat exchange system having in combination a first heat exchanger for varying the temperature of a heat transfer medium from one value to a second value, a second heat exchanger for varying the temperature of said medium from said second value to a third value, control means for varying the heat exchange rate of said second heat exchanger in accordance with a resultant of said first and second temperature values, and control means for varying the heat exchange rate of said first heat exchanger in accordance with a resultant of said first and said third temperature values.

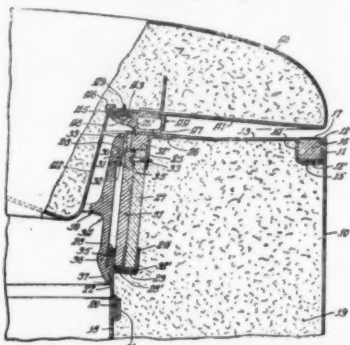
154,964. DESIGN FOR A REFRIGERATOR CABINET. Harold Van Doren, Ardmore, and Robert A. May, Wynnewood, Pa., assignors to Philco Corp., a corporation of Pennsylvania. Application Feb. 28, 1949, Serial No. 1,098. Term of patent 3 1/2 years. (Cl. D67-3.)



The ornamental design for a refrigerator cabinet, substantially as shown and described.

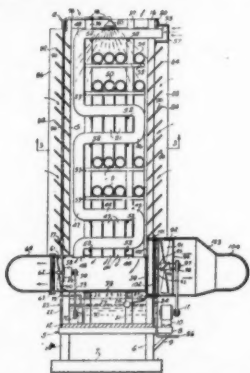
Week of August 30

2,480,257. REFRIGERATOR CONSTRUCTION. John S. Palmer, Chicago, and Lester H. Hinkel, Cicero, Ill., assignors to International Harvester Co.



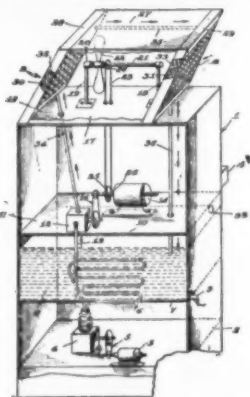
1. A breaker strip construction for refrigerators comprising in combination with a refrigeration cabinet having an inner wall, an outer wall, and a spacing wall extending from the outer wall to a point spaced from the termination of the inner wall, said spacing wall having a downturned flange at its extremity substantially in vertical alignment with the inner wall, and angle-spaced breaker securing member fixed to said spacing wall spaced inwardly from said flange, said inner wall being provided with an inwardly bent portion and a terminating flange in alignment with the flange on the securing member, a strip of rigid insulating material fitted against said aligned flanges, a seal securing member mounted along the top and bottom of the outer face of said insulating strip, said insulating strip and seal securing members being spaced from the downturned flange on the spacing wall and from the inwardly bent portion on the inner wall, each of said members being provided at their outer sides with channels opening in opposite directions to each other, said channels lying generally in a plane spaced from and parallel to the insulating strip, and a flexible rubber-like sealing element having lip portions engaged in said channels and having portions extending beyond said lip portions adapted for bridging said spaces between said seal securing members and the spacing wall flange on one side and the inwardly bent portion on the inner wall on the opposite side, the upper extending portion engaging the downturned flange on said spacing wall, and the lower extending portion engaging said inner wall, and the intermediate portion of the sealing element being in horizontally spaced relation to provide for increased flexing of the sealing element.

2,480,286. TOWER-TYPE AIR CONDITIONING APPARATUS. Martin E. Collis, Houston, Tex.



2. A tower-type air-conditioning apparatus, including a support, supporting means mounted on the support, a water supply means mounted on the latter, an air receiver also mounted on said support, a plurality of upwardly-extending and sinusoidally-formed air tubes supported on the supporting means with the lower ends thereof opening into the air receiver and the upper open ends of the air tubes exposed upon the upper portion of the apparatus at one side thereof to the atmosphere, at least one water sprinker mounted on said apparatus above said air tubes, means for elevating water from the water supply means to the water sprinker, an air delivery pipe connected to said air receiver, means for propelling the air received into the latter from said air tubes into said air-delivery pipe, a second air-delivery pipe opening inwardly toward the lower external portions of said air tubes independently of said air receiver, a plurality of inwardly-directed air guide means located upon all sides of said apparatus about said air tubes for directing air against the latter when drawn into the apparatus toward the second air pipe, means for propelling the air to the latter from about said air tubes to cool said tubes and produce forced evaporation therefrom, control valves individually disposed in both air-delivery pipes, and a common air-delivery pipe connected to the latter two delivery pipes.

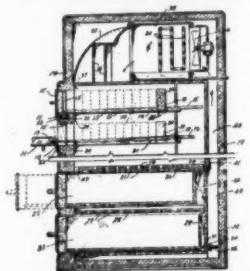
2,480,306. AIR CONDITIONING APPARATUS. Jose Sanchis, Newark, N. J.



1. In an air conditioning and cooling device, a cabinet, a motor driven liquefying unit in the said cabinet, a water compartment, said liquefying unit comprising an evaporator coil extending into the water compartment, an air cooling

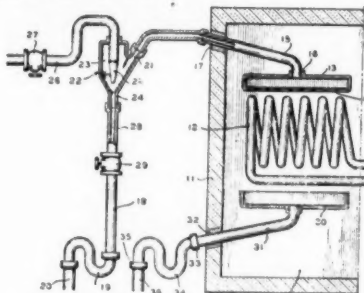
compartment at the top of the cabinet, a pair of oppositely disposed interconnected radiators forming walls for said cooling compartment, said radiators comprising spaced apart pipes which slant upwardly and outwardly from the bottom of the air cooling compartment, a water circulating system connecting the water chamber to the radiators, and a fan for drawing air through the spaces between the pipes of one radiator and expelling same through the spaces of the opposite radiator.

2,480,339. FORCED AIR REFRIGERATED DISPLAY CABINET. Milton E. Kin, Denver, Colo., assignor, by mesne assignments, to Prez-O-Mat Corp.



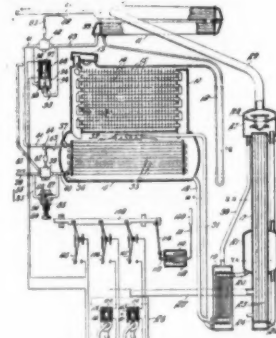
7. A method of refrigeration which comprises, establishing a pressure differential of the air within a substantially closed compartment to cause movement of air therein moving said air into heat interchange relationship with a refrigerating medium to reduce the temperature of said air and reduce its moisture content, passing said refrigerated air into heat interchange contact with articles to be refrigerated, withdrawing said air so passed at a point remote from its initial contact with said articles and returning said withdrawn air to the low pressure zone of said compartment, and replenishing air lost in said circuit by passing atmospheric air from the exterior of said compartment to the low pressure zone of said compartment.

2,480,346. MEANS FOR DEFOSTING COILS. Mahlon B. Watts, Waynesboro, Pa., assignor to Frick Co., Waynesboro, Pa.



1. A refrigeration system comprising a refrigeration compartment, a cooling unit disposed in said compartment, a defrosting system for removing accumulated frost from said cooling unit, said defrosting system comprising a spray head disposed above said cooling unit, a drip pan disposed beneath said cooling unit, a drain connected to said drip pan and extending exteriorly of said compartment, a liquid trap in said drain, a liquid supply conduit connected to said spray head extending upwardly therefrom and exteriorly of said compartment, said liquid supply conduit being connected to the intake of an ejector, a liquid supply line having a valve therein connected to said ejector, a discharge conduit having a valve therein and a liquid trap connected to the outlet of said ejector whereby upon closing of the valve in said discharge conduit and opening of the valve in said supply line liquid will flow through said ejector and into said spray head and be sprayed over said cooling unit, thus melting the frost accumulated thereon, the liquid and melted frost being collected in said drip pan and removed from said compartment through said drain and whereby upon opening of the valve in said discharge conduit said ejector will operate to produce a partial vacuum in said liquid supply conduit and said spray head thereby removing all liquid present therein and upon continued operation of said ejector to thereby remove any water vapor present in the vicinity of said cooling unit, thus rapidly defrosting said cooling unit while maintaining a relatively low temperature in said compartment.

2,480,497. REFRIGERATION APPARATUS, INCLUDING A SYSTEM FOR COOLING PARTS THEREOF. Fred C. Meyer, Dayton, Ohio, assignor to Servel, Inc., New York, N. Y.



1. In absorption refrigerating apparatus, a generator, a condenser, an evaporator, an absorber, conduits interconnecting the elements to provide circuits for the circulation of refrigerant and absorbent, a cooling system for flowing a cooling medium through the absorber and condenser successively, valves in the cooling system for controlling the flow of the cooling medium through the absorber and condenser, and a separate thermostat for operating each valve and so arranged as to be responsive to the temperature of the cooling medium flowing from the absorber and condenser respectively.

2,480,503. METHOD FOR TREATING COILED BODIES. Ernest A. Wordberg, Southport, Conn. Application July 11, 1946, Serial No. 604,333. 4 Claims. (Cl. 242-55.)

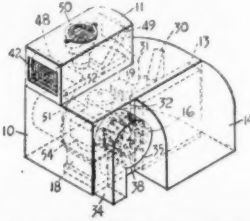
1. The method of treating a coiled arborwood condenser body, which consists in twirling the body on its axis

and simultaneously exerting a continuous inwardly-radial pressure upon its periphery.



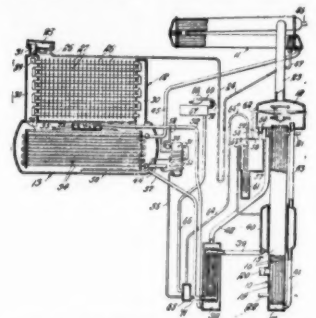
pheral surface, said twirl being in the direction which coils the body more tightly about its axis.

2,480,510. MOTOR VEHICLE AIR CONDITIONING APPARATUS. Richard F. Roper, Washington, D. C.



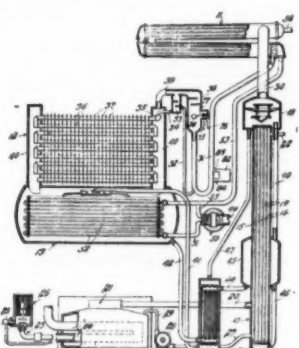
1. An air conditioning apparatus comprising a casing having a rear end wall open to external atmosphere, a condenser associated with said rear wall, a compressor and a prime mover including a driving shaft in the casing, a centrifugal fan housing positioned exteriorly of said rear wall having an axial inlet and a downwardly directed peripheral discharge opening, said housing providing a trough in the bottom thereof, below and laterally of the discharge opening, a centrifugal fan on said driving shaft in the casing, a conduit for hot refrigerant leading from the compressor to the condenser and including a section associated with said fan housing and in heat exchange relation to said trough, and means for delivering water to the trough for evaporation by the heat of the refrigerant in said conduit.

2,480,530. APPARATUS FOR AND METHOD OF RETURNING PURGED INERT GAS TO AN ABSORPTION REFRIGERATING SYSTEM. Eugene F. Whitlow, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.



1. An absorption refrigerating system having a high and a low-pressure side and including a generator, a condenser, an evaporator, an absorber and conduits interconnecting said elements providing main and auxiliary circuits for flow of working media therethrough, means for accumulating non-condensable gas in a main circuit for working media, means for withdrawing at least a portion of the accumulated non-condensable gas from said main circuit, means for storing the withdrawn non-condensable gas out of the main circuit, means providing a liquid seal for temporarily retaining the withdrawn non-condensable gas in storage, and means for intermittently filling and draining the liquid seal during continuous on periods of operation of the systems, whereby non-condensable gas is withdrawn from a main circuit for working media, temporarily stored out of the main circuit and then returning to the main circuit during on periods of operation of the system.

2,480,544. AIR CONDITIONING. Ralph M. Buffington, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 23, 1947, Serial No. 723,734. 18 Claims. (Cl. 257-3.)

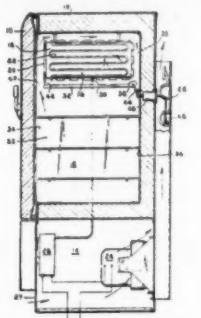


13. The method of establishing a pressure-balancing liquid column between the high and low pressure sides of an absorption refrigerating system of the two-pressure type which comprises flowing refrigerant vapor from a place of vapor expulsion to a place of liquefaction while simultaneously flowing hot absorption solution to a place of absorption, flowing cooling water directly to the place of liquefaction whereby the refrigerant vapor delivered thereto is liquefied, flowing the liquid refrigerant to a place of accumulation thereby gradually building up a liquid column, continuing the flow of cooling water directly to the place of liquefaction until the liquid column is established, and shifting the flow of cooling water from the place of liquefaction directly to the place of absorption responsive to the establishment of the liquid column.

2,480,617. REFRIGERATOR, INCLUDING MEANS FOR CONTROLLING CIRCULATION OF AIR THEREIN. Raymond E. Tobey, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.

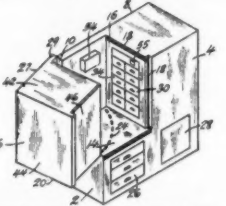
1. In a refrigerator including an insulated chamber, a partition in said chamber defining an upper and a lower food storage compartment, said partition including a valve, an evaporator in the upper compartment, refrigeration condensing and circulating apparatus for supplying liquid refrigerant to said evaporator and withdrawing refrigerant vapor therefrom, said apparatus having a portion

which rises in temperature in response to the heat load on said evaporator and also in response to the temperature ambient the insulated compartment when said ap-



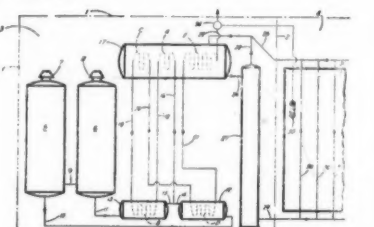
paratus is operating, the combination with said refrigerator of a thermostat responsive to the temperature of said portion and operatively connected to said valve to increase the opening thereof when the temperature of said portion rises and to decrease said opening when the temperature of said portion falls.

2,480,640. REFRIGERATED STORAGE CABINET. Harry Fowler, Trenton, N. J.



1. A refrigerator comprising an insulated base, an insulated rear wall extending upward from said base, a stationary storage section located above said base and in front of said rear wall and having openings for access thereto in both the front and one side wall thereof, a movable storage section located adjacent one end of said rear wall for movement in a horizontal plane into and out of a closed position in which one vertical face of the movable section is located adjacent said rear wall and another vertical face thereof is located adjacent said side wall of the stationary section, said vertical faces of the movable section each being uninsulated and each having an opening therein for access to the interior of the movable section, and refrigerating means mounted on said rear wall in position to refrigerate said movable section when the latter is moved to said closed position.

2,480,693. REFRIGERATING APPARATUS. David Aronson, Greensburg, Pa., assignor to Elliott Co., Jeannette, Pa., a corporation of Pennsylvania. Application July 2, 1947, Serial No. 758,612. 9 Claims. (Cl. 62-92.)



5. Refrigerating apparatus for circulating a highly volatile secondary refrigerant at a substantially uniform temperature in a closed circuit that is in heat exchange relation to a liquid primary refrigerant having a very low boiling point and to a refrigerator compartment, said apparatus comprising a tank for storing the liquid primary refrigerant, a vaporizer located at a lower level than the tank and having a plurality of separate passages therethrough including a first passage connected to the tank for receiving and vaporizing liquid primary refrigerant and at least two cooling passages in heat exchange relation to the first passage, a condenser located at a higher level than the vaporizer and having a plurality of separate passages therethrough including a first passage adapted to receive and condense a highly volatile secondary refrigerant from the refrigerator compartment and at least three warming passages in heat exchange relation to the first passage, conduits connecting the warming passages in the condenser and the cooling passages in the vaporizer alternately in series, a conduit connecting the first passage in the vaporizer to a warming passage at one end of said series so that vaporized primary refrigerant withdrawn from the first passage in the vaporizer will be alternately and successively warmed at least three times in different warming passages in the condenser by absorbing heat from the secondary refrigerant in the first passage of the condenser and cooled at least twice in different cooling passages in the vaporizer by giving up heat to the liquid primary refrigerant in the first passage of the vaporizer, whereby the secondary refrigerant will be condensed to a liquid and the liquid primary refrigerant will be vaporized, a surge tank for receiving liquid secondary refrigerant condensed in the first passage of the condenser and in which the normal level of said liquid is lower than the level of the warming passages in the condenser, a liquid conduit for withdrawing liquid secondary refrigerant from near the bottom of the surge tank and conducting it to the refrigerator compartment, an evaporator in the refrigerator compartment connected to the liquid conduit for receiving liquid secondary refrigerant therefrom and evaporating it, a vapor conduit connected to the evaporator for withdrawing evaporated secondary refrigerant therefrom and conducting it back to the first passage in the condenser where it is recondensed, a conduit connecting the top of the surge tank with the vapor conduit so that any secondary refrigerant evaporated in the surge tank will be conducted back to the first passage in the condenser, and a valve adapted to respond to the temperature in the refrigerator compartment for controlling the flow of liquid primary refrigerant to the first passage in the vaporizer in accordance with that temperature.

(To Be Continued)



PRODUCT QUALITY NEEDED MORE THAN SALESMANSHIP

P. O. Box 240
San Benito, Texas.

Editor:

I read, with interest, each week your column (Inside Dope) and appreciate nearly every word of it, except your items on the lack of interest in salesmanship among the young Americans.

I have been a salesman for a goodly number of years and prior to the last war I made a host of friends by coming close to "High Powering" them into buying new refrigerators, ranges, washers, etc. These people are still my friends and only this morning I was called to one of our prominent citizen's homes to check on his 1940 refrigerator and when I congratulated him on the way it had been taken care of he remarked that it had been an excellent piece of merchandise.

This is not true today. I can truthfully say that 50% of the people whom I have sold the same brand of merchandise to since the war are not my friends today. I don't believe they could have gone elsewhere and purchased better merchandise nor do I think I could have done better in changing brands. Every man, "who is in his right mind" appreciates do-

ing something that he will receive praises for in future years and on the other hand few people want to enter on a vocation that they will be condemned for in after years.

I have hired several young people (of both sexes) in past two years who thought they would like to be salesmen, but it only takes them a few weeks to find the list of dissatisfied customers and they are out looking for a different vocation.

When the manufacturer can get his house in order, put out good merchandise put together right, and go out in the home and get the job done as the householder wants it done and will tell the salesman that they are glad they purchased their merchandise, nobody will have any trouble finding all the good salesmen they want.

C. F. BARR

FIGHTING 'PLANNERS' WILL BEAT COMMUNISM

Societa Arcon
C. Battisti 2
Torino, Italy

Editor:

Although owner and general manager of the Societa Arcon, manufacturer of refrigeration accessories, what do you suppose I read when I receive my weekly REFRIGERATION NEWS? Well to be perfectly honest, the first thing I read is your "Inside Dope," subsequently I also read all the other interesting news pertaining to the refrigeration field. I have just finished reading your recent column on "It Can Happen Here," and let me tell you, you hit the nail right square on the head. Congratulations, not only for your patriotic stand, which deserve all credit, but also on your keen sense of discernment.

I was born in Boston, came to Italy on a business trip when I was 33, met my wife and have since lived in Italy. I say this merely to explain that I lived through years of dictatorship, war, postwar anarchy and present democracy, hence I feel that I am in a good position to judge the merits of your wholesome campaign to wake up the better Americans to a realization of what they will be up against soon if they do not shake off the effects of all the subtle communist propaganda, in all fields, towards State planification versus good old American Free Enterprise.

I also agree with you that the good hard earned dollars that American taxpayers are pouring into Europe through ERP should be given with greater discernment on the part of the U.S.A. Not that this ERP is a mistake, far from it, but what I mean is that, in order to fight the Commies properly, we should do so without holding back any punches. The Commies are our enemies, even my two children know that, therefore why not force all those countries who are getting the benefits of the ERP help, to openly declare that to continue to get such aid each respective government must clean up house, namely, drive the Commies underground where they belong, or in plain English each government should within a reasonable space of time declare Communists or the Com-

munist party in each respective country as outlaws. Why should a government that receives our Capitalistic assistance be permitted to consider lawful and legitimate a Communist party that notoriously does everything possible to sabotage the ERP plan? ? ?

In Italy we are a step ahead of some countries such as France because the Commies are not in the government, whereas in some countries receiving ERP help the Commies actually are part of the existing government.

Italy and Italians believe in Democracy, they cannot help it, for the simple reason that they have learned their lesson through Fascism, they know what a Dictatorship leads to, and as proof of what I say the results of the April, 1948 elections in which the Communists were badly beaten shows that Italy is on the right track. But, countries such as Italy, that are democratic in structure, are undergoing a very hard battle, as a result of the Moscow ordered sabotage among its factory workers. To help these countries to maintain themselves Democratic and to get their reconstruction program safely completed they must not only get American dollars through ERP, but must simultaneously get political backing from Uncle Sam in such manner as to force them to fight Communism more effectively. If these Democratic governments, weak as they are, know that the U.S.A. will back them up very definitely in any open fight against the local Commies, then they will get the guts to drive the Commies into such a political hole where they would no longer hinder proper reconstruction. As things stand today, they dare not fight the Commies more than they do because Uncle Sam has not made it clear as to just how far he is willing to back them.

As a kid I ate up all the typical Horatio Alger literature I could find and even today although 46 years have passed I confess that I still love that spirit. I am amazed to hear that Horatio Alger is being thrown in the wastebasket by some Americans in favor of other pinkish reading material. There is only one answer to that; it's up to us fathers to wake up, and get all the cockeyed leftist screwball ideas out of the heads of the youngsters. By Jove if I can do it here in Italy where Communists are all over the place surely it should be an easier job for American fathers in America. It's not simple, but it can be done, and what is more it *must* be done. But then there is no sense telling you what you already know. I can only say that your "Inside Dope" should also appear in many American daily newspapers so that a greater number of Americans could really get some inside information.

I hope to go to the States, after 15 long years, sometime this spring. To do so I must first get my citizen status straightened out with the State Dept. At present I am having difficulty in getting a visa at the State Dept. On such occasion I intend going to Detroit on business, and I trust I may have the pleasure of meeting you personally.

Until then keep up the good work, and if I can do anything for you at this end you can count on me.

HARRY C. MILANO

FEELINGS OF INDUSTRY VOICED IN EDITORIALS

Wilderman Refrigeration Co.
Seattle, Wash.

Editor:

For many years I have followed and enjoyed your publication, particularly the editorials. They express the feelings of many in the industry, but are given with a clarity and directness of language which is beyond the majority of your readers.

J. WILDERMAN

Revco CHILL CHESTS



Be sure you see the complete line of Revco CHILL CHESTS at Chicago January Market—visit Revco—Merchandise Mart Display Space 1454. Write, Today, for Revco Franchise Details!

Revco, Inc. • Deerfield, Michigan

REFRIGERATION RANKS HIGH AS CHINESE NEED

Hua Chung University
Wuchang 4, Hupeh, China

Editor:

I am an industrial engineer, retired from active practice in the United States and am making my home with my daughter, faculty member of the above university. Wuchang is in deep central China, several hundred miles from Shanghai and Hong Kong and therefore, quite removed from the current political unrest.

Many of my Chinese engineering colleagues are greatly interested in working out a practical means of introducing mechanical refrigeration into the economic life of interior China. They have expressed the opinion that, second only to transportation and communication, refrigeration of foodstuffs would be of great value and importance in improving the domestic economy of the country.

Meat animals are slaughtered at night, transported to the local markets and sold by noon. There is no carryover. Cooks purchase each morning the ration for the day which is completely consumed on the day of purchase. There is no refrigeration of fruits and no cold storage of farm products.

I should be very glad to enter into correspondence with American refrigeration engineers of an inquiring turn of mind who are interested in a long term project of almost unlimited economic potentialities. Obviously we cannot expect an immediate commercial return, but collaboration between American refrigeration "know-how" and my somewhat intimate knowledge of Chinese domestic and commercial life might be interesting and helpful in extending the use of mechanical refrigeration.

A. C. EARNshaw

WAS 'STABILIZER' IDEA ORIGINAL WITH TINKY?

Yank Refrigeration Service
Pittston, Pa.

Editor:

I read your article in the Oct. 24, 1949, issue of the NEWS on "Auto Unit Stabilizer Holds Even Evaporator Temp., Low Head Pressure."

About three years ago I picked up a reach-in box 30 cu. ft. at an auction sale in Philadelphia. The refrigerator was of German make with a 1/2-hp. motor and a variable speed pulley. The receiver exchanger you mention in your article is the same and the application is the same. I studied the receiver and figured it was a good idea. I still have the complete unit and would like to know if the idea was original with Mr. Tinky.

I understand that the Germans made wide use of this principle.

STANLEY YANKOWSKI

'STABILIZER' COULD BE APPLIED IN MANY FIELDS

American Moistening Co.
Providence, R. I.

Editor:

In your Oct. 24 issue of AIR CONDITIONING & REFRIGERATION NEWS on page 12 there was an article about the auto unit "Stabilizer." I am not interested in this stabilizer for the usage with which it was described, namely automobile air conditioning, but any device which would tend to hold an evaporator or coil temperature at close to one degree would be valuable in a lot of applications.

I would appreciate it very much if you could tell me how I could get more information on the above and I am enclosing a copy of this letter so that you could pass it along to the proper persons who might furnish me with this information.

M. H. IRONS

Answer: Otto Tinky's address is 6264 Olive Blvd., St. Louis 5.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

CAREFULLY SELECTED group of trained men, graduates of reliable and well established trade school now available to fill positions in the radio or refrigeration field. Willing to travel anywhere. Why not fill that vacancy with an efficient and reliable man? Write EASTERN TECHNICAL SCHOOL, 888 Purchase Street, New Bedford, Mass.

ENGINEER-SERVICE Manager, 15 years experience in engineering, installation and service, ammonia and "Freon" refrigeration equipment of all sizes. I have been distributor of leading line of commercial equipment for 10 years. I am 33 years old. Position in Mid-West desired. BOX 3375, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

OPPORTUNITY-CARRIER Corporation has openings for district commercial refrigeration managers and merchandising managers for South and Mid-west locations, due to expansion of field sales organization. Must be high calibre, having successful sales record and experience in contacting distributors and dealers. Write in c/o Personnel Division, Syracuse, N. Y., giving educational background, companies worked for, position held, earning record, family status and recent photograph.

OPPORTUNITY FOR successful salesman. If you are now making more than \$5,000.00 per year and have a desire to improve your earnings, join the progressive, hard-hitting sales force of the York distributor for Northern New Jersey, ELECTRIC PRODUCTS, INC. Send resume to us at 106 Nelson Avenue, Jersey City 7, New Jersey.

MANUFACTURER'S REPRESENTATIVE wanted Virginia, North Carolina area. To establish dealers and distributors to handle the Federal complete line of refrigerated store fixtures. Latest design self-service models for every use. Give qualifications, references and other lines handled in reply. FEDERAL REFRIGERATOR MFG. CO., P. O. Box 465, Waukesha, Wisconsin.

WANTED-EXPERIENCED commercial refrigerator salesman capable of appointing and training dealer organizations in Mid-West. Large established manufacturer with complete line. Our organization knows of this ad. Write BOX 3365, Air Conditioning & Refrigeration News, giving complete details as to qualifications.

MIDWEST JOBBER requires high type young man with refrigeration wholesale experience. Wonderful opportunity for right man with well rated company. All replies held confidential. Address BOX 3373, Air Conditioning & Refrigeration News.

DESIGN-DEVELOPMENT engineer. Well known Middle West manufacturer of controls has immediate employment for an engineering graduate. Three years experience in refrigeration engineering and/or three years design-development experience on electrical or mechanical control devices required. Designer must execute projects from idea through the completed drawings. Please give age, education, experience and salary expected in first letter. All replies confidential. BOX 3374, Air Conditioning & Refrigeration News.

WELL ESTABLISHED distributor York air conditioning and refrigeration equipment wants sales engineer for Connecticut territory. Five figure position which requires graduate engineer with successful background of business, estimating, retail sales, contract and installation experience. Domestic, industrial oil burner and heating experience desirable. Future possibilities are unlimited. Give full details, confidential. BOX 3376, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

WHOLESALE SEALED unit exchange and rebuilding. We will rebuild and convert your unit to "Freon-12." One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Michigan.

2 1/2" ODS WING-cap globe valves, new and clean, \$19.76 each delivered. Also 3/4" flare x 3/4" IPS angle receiver valves @ 75¢ and 3/4" ODS x 3/4" MPPT packless angle valves @ \$3.00. Manufacturer and figure number on request. ANCHOR SUPPLY CO., 1742 Fourth Ave. South, Seattle 4, Wash.

COMPRESSORS, NEW 1, 3 & 7 1/2 H.P. water cooled, at less than distributor's cost. BIMEL CO., Cincinnati, Ohio.

BUSINESS OPPORTUNITIES

HAVE 10,000 square feet of warehouse space with a railroad siding in Baltimore, Maryland. Show room available with sales and service facilities optional. Will consider proposition mutually beneficial or will lease outright. PUBLIC SERVICE ELECTRIC CO., 605 W. North Ave., Baltimore 17, Maryland.

SCHOOLS

DETROIT AIR Conditioning Institute is accepting applications for enrollment in spring term classes starting January 31, 1950. Fully GI approved courses in air conditioning, refrigeration, heating, ventilating, sheet metal layout, heat pump engineering. Write for free information. DETROIT AIR CONDITIONING INSTITUTE, Dept. D, 4125 Grand River, Detroit 8, Michigan.

MISCELLANEOUS

NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock, 1 year guarantee. Write for prices and shipping instructions. Complete Norge engineering service. 23 years experience. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 8, Michigan.

Genuine Joe says...
"Send for this
FREE Bulletin"

Write for Catalog
MU-40... Every repair
shop needs one. It
helps determine the
catalog number and
price of Wagner
Motor Parts.

Wagner Electric Corporation
6371 PLYMOUTH AVENUE, SAINT LOUIS 14, MO., U. S. A.

SPECIFY
ACME
PRODUCTS
WHERE
performance
COUNTS

AMMONIA
CONDENSERS
OIL SEPARATORS
LIQUID RECEIVERS
HEAT EXCHANGERS
PIPE AND FIN COILS
DRY-EXWATER CHILLERS
EVAPORATIVE CONDENSERS
HI-PEAK WATER COOLERS
FREON SHELL AND TUBE
CONDENSERS
FREON SHELL AND COIL
CONDENSERS
BLO-COLD INDUSTRIAL
UNIT COOLERS

ACME INDUSTRIES INC.
JACKSON, MICHIGAN
Representatives in principal Cities

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ \$5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City.....Zone.....State.....

12-19-49

NLRB Goes on Record

Employer Need Not Bargain with Union That Doesn't File Non-Communist Affidavit

WASHINGTON, D. C.—The National Labor Relations Board has ruled that an employer has no legal obligation to bargain with a labor organization unless it has already complied, at the time it seeks to bargain, with the filing and non-Communist affidavit requirements of the Taft-Hartley Act.

The Board held further that an employer may make a wage increase without consulting a non-complying union, even though it represents a majority of his employees.

However, the board made it clear that this ruling applies to the rights of unions. It does not permit employers to discriminate against employees for membership in a non-complying union or to interfere otherwise with the rights of individual employees under the Act.

It was the first ruling on these points.

The ruling was made in a case involving the Andrews Co., a Spartanburg, S. C., ball-bearing manufacturer, and the American Federation of Labor.

A three-member majority of the board held that the company did not violate the Act by refusing to bargain with the A. F. L. when the federation had not yet met the affidavit and filing requirements, although it complied shortly thereafter. The majority held also that the company did not violate the Act by making a wage increase during this period without consulting the federation, be-

cause "there was no exclusive representative then in existence which the [company] was obligated to recognize."

The federation made no new request for bargaining after it filed the financial reports and affidavits required by the Act, but thereafter filed charges with the board. The majority held that this later compliance did not make the employer liable for failure to bargain when the union was not in compliance.

The majority—composed of Board Members James J. Reynolds, Jr., Abe Murdock, and J. Copeland Gray—declared that, "absent this element of non-compliance," they would have found the employer had illegally refused to bargain.

The board said unanimously that non-compliance of a union could not be used by an employer as a defense against any unfair labor practices involving the rights of individual employees. On this point, the board said:

"As previously noted, Section 9 (f), (g), and (h) relate to unions' right only, thus leaving unaffected the rights created in Section 7 for individual employees. Accordingly, non-compliance may not be raised as a defense to a charge alleging violation of Section 8 (a) (1)." [Section 9 (f), (g), and (h) contain the filing and affidavit requirements. Section 8 (a) (1) forbids employers from interfering with, restraining, or coercing employees in their right to self-organization.]

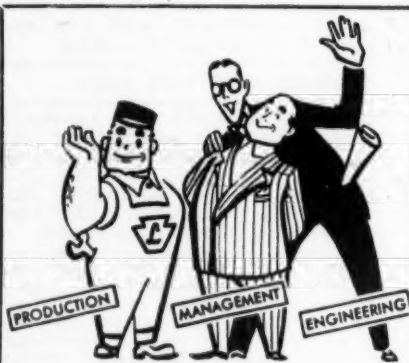
'50 Estate Range Line Shows 2 Models Dropped

NEW YORK CITY—The Estate-Heatrola Div. of Noma Electric Corp. has reduced the number of electric ranges in its Estate line from seven to five, it was revealed here recently during a distributor showing of 1950 models.

The reduction was said to be made in order to reduce dealer inventory problems.

The 1950 line is similar in price and appearance to the 1949 line, it was reported. The venting system to reduce surface temperature has been improved, heat seals are said to be better, the doors are made adjustable, and new T-K heating elements have been added that are claimed to provide more heating surface and be easier to clean.

Prices of the new models were given as: 5010—\$189.95, 5012—\$249.95, 5014—\$299.95, 5016—\$349.95, and 5018—\$359.95.



Season's Greetings

From The

LEHIGH TEAM

★ Management

★ Engineering

★ Sales

★ Production



Lehigh

Manufacturing Co.
LANCASTER, PENNA.

Export Dept. 39 Broadway
New York 6, N. Y.

Hearings Set for Union Dispute at Westinghouse

WASHINGTON, D. C.—The National Labor Relations Board last week announced that it will conduct hearings in Pittsburgh on Dec. 28 on the factional dispute between electrical union employees of Westinghouse Electric Corp.

The board will seek to determine whether or not immediate elections should be held to settle the question of which union—the United Electrical, Machine, and Radio Workers or the International Union of Electrical, Machine and Radio Workers, CIO—represents the company's employees.

This is the second such hearing scheduled by NLRB. The first will be held on Dec. 19 in Dayton and will involve workers of the Frigidaire plant and other General Motors plants in the area.

About 40 plants and 55,000 employees are affected in the Westinghouse hearings. The UE, which holds the present contract with the company, opposes any election before March 15, 1950. The IUE-CIO is plugging for immediate balloting.

John A. Panello, director of the NLRB's fifth region, stated that the board is preparing to set hearing dates for the General Electric Co. which will be announced soon.

Dept. Store Sales Skid 8% for Week of Dec. 3

WASHINGTON, D. C.—An 8% drop in department store sales for the week ending Dec. 3 as compared with the corresponding week last year was reported recently by the Federal Reserve Board.

Stores in all districts reported declines, which ranged from 3% in the Minneapolis and Richmond districts to 10% in the Cleveland district. Percentage drops by Federal Reserve district were: Boston 5; New York, Philadelphia, and Atlanta 7; Chicago and San Francisco 8; and St. Louis, Kansas City and Dallas 9.

Admiral To Introduce New Line Jan. 5-7

CHICAGO—A national convention of Admiral Corp. distributors will be held at the Drake hotel here from Jan. 5 to 7 at which the company's new 1950 line of refrigerators and television sets will be shown, it was reported recently.

The new lines are expected to be introduced publicly at the winter furniture market.

Koch Supply Div.--

(Concluded from Page 1, Column 3)

Starr has been an officer of the Koch Butchers' Supply Co. for many years. Most of the personnel of the supply division of the older organization will join Starr in the Koch Supply Co.

Among them are Clyde E. Dillon, who will be manager; Joseph M. Murray, purchasing agent; Martha Bennett, assistant agent; Walter B. McCray, sales manager; and Ray Miller, advertising manager.

Stock and fixtures of the Koch Supply Co. will be moved to the new location over the long weekend of New Year's Day. The new firm will be open for business on Jan. 3, 1950.

The Koch Butchers' Supply Co. will continue its Koch refrigerators division at its present North Kansas City address; and will expand to take in all the floor space being vacated by the supply division.

Personnel of the refrigerator organization will remain unchanged, with the following, among many others, continuing in their present capacities:

W. R. McShane, sales manager; Sam Glass, advertising manager; C. K. Litman, general plant superintendent; O. W. Marr, production manager; and Clarence Masters, product development manager.

Mayer stated: "This separation of activities is a normal and natural one. It has been brought about by the steady growth of both divisions of the company, and the attendant need for more concentrated management for each. I am sure the new arrangement will be highly beneficial to both businesses."

Crowning 'Miss Refrigeradorable' at Bowl Game



Alan Johnson, Seeger Refrigeration Co.'s sales manager; Jack Knighton, sales manager for Servel, Inc.; and George Donovan, International Harvester district manager pose with their companies' candidates for "Miss Refrigeradorable" who was crowned at Evansville's recent Refrigerator Bowl Classic.



Jaycee President Del Greenwood crowns Seeger's Miss Enie Jent "Miss Refrigeradorable." One purpose of the festival was to publicize Evansville as World's Refrigerator Capital.

TYPHOON

Rounds Out the Quick Profit Range of Packaged Air Conditioners—

with the **NEW**

15 and 20-TON UNITS




- "Central plant" performance with packaged unit economy.
- The fan section is adjustable so that it can be used for horizontal or vertical discharge. This feature, combined with convenient filter section, makes easy the connection to a duct system.
- Ruggedly built, super-powerful new models—completely packaged, factory assembled and tested.

NOW Typhoon dealers can handle the widest range of jobs in the popular big profit field.

1½ to 20 Ton Air Conditioning Units plus evaporative condensers—compressors—low side units.



Over 40 Years' Experience
Serving America's
Air Conditioning Needs

Tie Up with Typhoon—Write for Full Information About Your Territory

TYPHOON AIR CONDITIONING CO., INC.

794 UNION STREET • BROOKLYN 15, N. Y.